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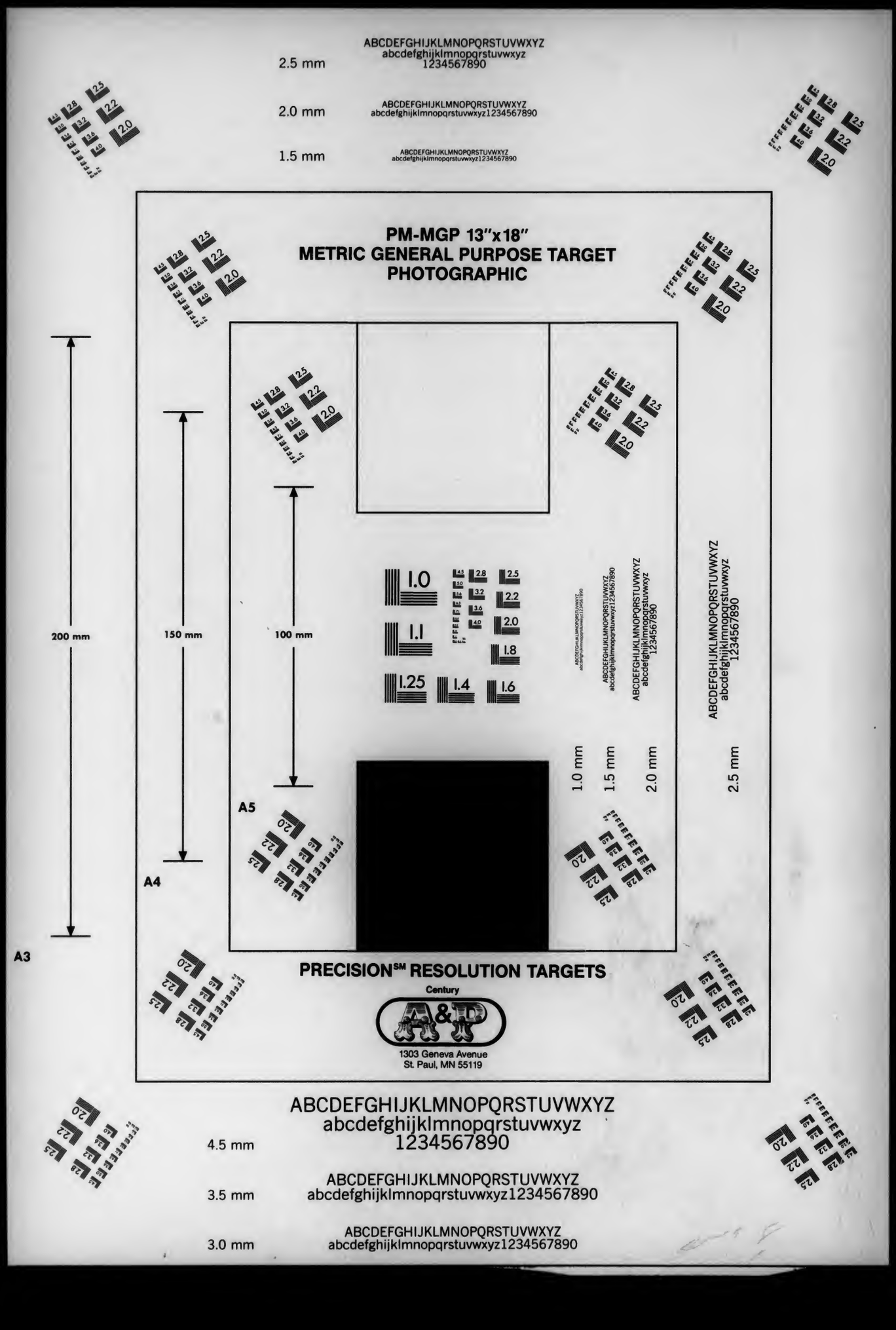
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CANNED FRUITS AND VEGETABLES AND RELATED PRODUCTS INDUSTRY

Economic Factors Affecting the Establishment of Minimum Wage Rates

56

MARCH 1943

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FOREWORD

On February 25, 1943, the Administrator of the Wage and Hour Division, pursuant to the provisions of the Fair Labor Standards Act, appointed Industry Committee No. 56 for the Canned Fruits and Vegetables and Related Products Industry. It is the statutory duty of this committee to investigate conditions in the industry, and, with due regard to economic and competitive conditions, to recommend to the Administrator the highest minimum wage (not in excess of forty cents an hour) which it determines will not substantially curtail employment in the industry. The statistical and other economic data given in the present report have been assembled for the purpose of assisting the industry committee in the performance of its statutory functions.

The report was prepared by William Hoffman, Associate Economist, under the general supervision of Verl E. Roberts, Chief of the Industry Committee Studies Section.

Harry Weiss, Director
Economics Branch

(12317)

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CANNED FRUITS AND VEGETABLES AND
RELATED PRODUCTS INDUSTRY

ERRATA

Page 19. Paragraph 4, line 4 – Change "in the industry" to "in the branch".

Page 29. Paragraph 5, line 4 – Change to "20 percent increase in consumer income".

Page 39. Paragraph 4, line 5 – Change to "From 1930 to 1936 the cutput per man-hour increased".

Page 43. Paragraph 5, line 8 – Change to "earnings in the South Atlantic states increased 10 percent".

Page 61. Table 37 – The figures shown are percentages of the total employment.

Page 71. Paragraph 2, lines 2 and 3 – Remove "and preserved".

Page 72. Table 45 – Change California fruit and vegetable canning to 45 cents per hour, effective February 8, 1943; and Washington rate to 52½ cents per hour, effective July 3, 1942.

(12394)

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DEFINITION

Administrative Order No. 182 defines the "Canned Fruits and Vegetables and Related Products Industry" as follows:

> The canning and preserving of fruits and vegetables, and the manufacture of related products.
>
> (a) It includes, but without limitation, the manufacture of jams, jellies and juices; soups of all kinds; relishes and sauces of all kinds; vinegar; cider; pectin; flavoring extracts and flavoring syrups; salad dressings; sandwich spreads (except those made principally from meat or cheese); peanut and nut butters; mustard and horseradish; mincemeat; honey; and canned spaghetti, chili con carne, stew, hash, and pudding, containing fruit or vegetables.
>
> (b) The term "canning," as used herein, means sterilizing and hermetically sealing in containers of tin, glass, or other material.
>
> (c) The term "preserving," as used herein, includes pickling, preserving, freezing, cold packing, drying, dehydrating, and similar processes.
>
> Provided, however, that this definition shall not include the manufacture of coffee; spices; malt extracts and syrups; salad and cooking oils including olive oil; potato chips; ready-to-mix desserts; or any products covered by the definitions of the Grain Products Industry, the Candy and Related Products Manufacturing Industry, or the Sugar and Related Products Industry, contained in the Administrative Orders appointing committees for those industries.

The definition of the Canned Fruits and Vegetables and Related Products Industry covers all occupations in the industry which are necessary to the production of the articles specified in the definition including clerical, maintenance, shipping, and selling occupations; provided, however, that this definition does not cover clerical, maintenance, shipping, and selling occupations when carried on in a wholesaling or selling department, physically segregated from the other departments of a manufacturing establishment, the greater part of the sales of which wholesaling or selling department are sales of articles which have been purchased for resale; and provided further that where an employee covered by this definition is employed during the same workweek at two or more different minimum rates of pay, he shall be paid the highest of such rates for such workweek unless records concerning his employment are kept by his employer in accordance with applicable regulations of the Wage and Hour Division.

Inclusions and Exclusions[1/]

The definition is designed to provide the industry committee with broad jurisdiction over the canning and preserving (as defined by the Administrator) of

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1/ The following discussion does not purport to be an all-inclusive statement of coverage, but is intended to indicate the general scope of the industry as defined.

fruits and vegetables, and the manufacture of related products. The latter term is construed to mean the manufacture of products related economically and industrially to the canning and preserving of fruits and vegetables. Thus, the industry includes products which are connected with fruits and vegetables as by-products or competitive products, or which are connected with the industry because they are generally made in plants canning or preserving fruits and vegetables or because they are in direct competition with products made in such plants. The term "preserving" as used in the definition of this industry includes pickling, preserving, freezing, cold packing, drying, dehydrating and any other process which is similar insofar as it is a means of food preservation.

Most of the products covered by the definition fall within the following Census classifications:

Canned and dried fruits and vegetables

This classification includes canned vegetables, canned fruits, fruit juices, canned soups (not including clam broth, chowder, juice and bouillon), fruit juices in bulk, dried fruit, dried and dehydrated vegetables, olives, tomato pulp in bulk, cold-packed fruits, and olive oil.

The definition of the industry includes, however, clam broth, chowder, juice and bouillon, even though these products are excluded by the Census. Olive oil is not included, as this product will be included in a different industry for wage order purposes.

Preserves, jams, jellies and fruit butters

Preserves, jams, jellies, fruit butters and related products, and maraschino cherries are included in this group. Preserves are generally defined as the product made by cooking to a suitable consistency fruit with sugar or other saccharine ingredients.

Pickled fruits and vegetables and vegetable sauces and seasonings

Included in this group are pickles, tomato ketchup, prepared horseradish, kraut in bulk, prepared mustard, chili sauce, and meat and other sauces.

Salad dressings

This group includes raw salad dressings, such as French, Thousand Island, Russian and mayonnaise, and cooked salad dressings.

Quick frozen foods

Although the Census classification embraces only establishments which quick-freeze fruits and vegetables for ultimate delivery to the consumer in a frozen state, quick frozen fruits and vegetables delivered to producers for subsequent processing are also included in this industry.

Flavoring extracts and flavoring syrups not elsewhere classified

This classification includes the manufacture of flavoring extracts

and of syrups and fruit juices for soda fountain use and for use as sauces for ice cream and other foods, and of colors for bakers' and confectioners' use. It does not include the manufacture of malt extracts and syrups, but does include the manufacture of flavored fountain and flavored beverage syrups, flavoring concentrates, powder and pastes, burnt-sugar and other colors, and crushed fruits for fountain use.

Vinegar and cider

Included is the manufacture of both fermented and distilled vinegar and cider.

In addition to the products referred to above, the present definition includes other products which are either canned or preserved fruits and vegetables or are related products, as previously explained. Among such other products are the following:

- Canned meat stews
- Canned meat hashes
- Canned "health foods"
- Canned chili con carne
- Canned tamales
- Canned ravioli
- Honey
- Canned mincemeat
- Pectin
- Peanut butter
- Sandwich spreads (except those made principally of cheese and meat)

It is not contemplated that the definition will include the manufacture of any product which is covered by the definition of any industry for which the Administrator has already issued a wage order or appointed an industry committee. Thus, chocolate, cocoa, marshmallow creme, candied and crystallized fruits, chocolate syrup, and stuffed fruits are not included, as these products are covered by the candy and related products wage order. Maple syrup, molasses, and sorgo syrup are excluded, as these products are included in the sugar and related products industry.

Potato chips, peanuts and other nuts except their butters, coffee, baking powder, spices, brown bread, sweetening syrups other than honey, salad and cooking oils, and ready-to-mix desserts such as those with corn starch, gelatin and tapioca base, even when packed in hermetically sealed containers, are considered to be outside the scope of the definition.

Overlaps

Some amount of overlapping is inevitable in defining an industry for purposes of fixing minimum wages. Often a plant will engage in a variety of activities, some of which cut across industry lines. In the canned fruits and vegetables and related products industry the overlapping occurs chiefly in the canning of vegetable and meat combinations such as stew, hash and chili con carne. It has been decided to include all such combinations in this industry rather than in the meat industry.

Exemptions Under the Wage and Hour Law

Three specific exemptions for the canning industry are provided in the Act, in sections 13(a)(10), 7(b)(3) and 7(c). As explained below, canners of perishable or seasonal fresh fruits or vegetables are effectively provided with a

total exemption from the overtime provisions of the Act for 14 weeks, and a partial overtime exemption for an additional 14 weeks.

Section 13(a)(10) exempts from both the minimum wage and overtime provisions of the Act "any individual employed within the area of production (as defined by the Administrator) engaged in handling, . . . storing, . . . drying, preparing in their raw or natural state or canning of agricultural or horticultural commodities for market . . ." An individual is regarded by the Administrator as employed in the area of production for present purposes if he performs the "operations on materials, all of which come from farms in the general vicinity of the establishment where he is employed, and the number of employees engaged in those operations in that establishment does not exceed 10."1/ It is evident that most canning employees are not exempt under this section.

Section 7(c) exempts from the overtime provisions of the Act, but not from the minimum wage provisions, all employees of any employer engaged in the first processing of, or in canning or packing, perishable or seasonal fresh fruits or vegetables during a period or periods of not more than 14 workweeks in any calendar year in any place of employment where their employer is so engaged. The 14 workweeks need not be consecutive and may apply to clerical employees, watchmen, and maintenance employees. The effect of this section is to exempt employees of fresh fruit and vegetable canning and freezing plants, and some employees of pickling and preserving plants, from the time and one-half provisions of the Act for 14 weeks per year. Employees are not exempt when performing operations on "processed" commodities such as dried fruits, frozen fruits, dried beans, pickles, etc., commodities no longer considered perishable or seasonal fresh fruits or vegetables because changes have been effected in their natural form.

Section 7(b)(3) provides an additional 14 weeks partial exemption from the overtime provisions of the Act for employees engaged in an industry found by the Administrator to be of a seasonal nature. Under this provision time and one-half need be paid only after hours in excess of 12 per day or 56 per week. The Administrator has determined 2/ that first processing and canning of perishable or seasonal fresh fruits or vegetables are seasonal in nature, thus giving an additional 14 weeks of partial overtime exemption to employees engaged in the first processing or canning of perishable or seasonal fresh fruits or vegetables.

The total of 28 weeks exemption for canned fruit and vegetable employees relieves the majority of plants from the obligation of paying time and one-half for overtime. A survey made by the Women's Bureau 3/ showed that of 295 plants canning seasonal fruits and vegetables in 1937 only 15 plants canned during more than 26 weeks. Even among plants canning both seasonal and non-seasonal products 71 out of 151 plants operated fewer than 26 weeks. In many cases, the weeks beyond 26 were non-peak, short weeks in which the hours worked were generally not over 40. In

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1/ Regulations defining the term "area of production." Title 29, Chapter V, Code of Federal Regulations, Part 536.

2/ Release R-974, August 24, 1940.

3/ Application of Labor Legislation to the Fruit and Vegetable Canning and Preserving Industries, Women's Bureau, U. S. Department of Labor, Bulletin No. 176.

plants canning seasonal products only, approximately 97 percent of the employees worked fewer than 26 weeks, while 89.5 percent of the employees in plants canning both seasonal and non-seasonal products worked fewer than 26 weeks.

It should also be noted that section 13(a)(6) of the Act contains an exemption from the minimum wage and overtime provisions for any employee employed in "agriculture." Agriculture is defined in the Act to include "any practices . . . performed by a farmer or on a farm as an incident to or in conjunction with such farming operations . . . ." Thus, canning performed by a farmer or on a farm as an incidental part of the farming of that farmer may fall within the scope of the section 13(a)(6) exemption.

In addition, section 13(a)(5) exempts from the minimum wage and overtime provisions of the Act employees engaged in canning of any kind of fish, shellfish, crustacea, or other aquatic forms of animal or vegetable life. It would seem clear, therefore, that the canning of clam chowder and other fish soups may in many cases be exempt from the scope of this wage order.

Description of Canning and Preserving Processes

The term "canning" is generally defined as preserving through sterilization and hermetic sealing in containers of metal or glass. Though the details of canning vary with the product being processed, the general operations are the same. Fresh fruits or vegetables are weighed and inspected as they arrive at the plant, prepared for canning by peeling, cutting, cleaning, blanching and grading, placed into the cans, and the cans conveyed to a closing or double-seaming machine where the top is crimped on to the body of the can.

The sealed cans are next processed, heat being applied either in pressure retorts or continuous cookers. After this sterilization and cooking, the cans are cooled in a cold water bath. If shipment is to be made immediately, the cans are labeled generally by an automatic machine and packed into cartons. Many seasonal products are stored in cartons without labels, however, and are labeled when sold. Hand labor is kept at a minimum, with conveyor belts and machinery used wherever possible.

Preserving differs from canning in that the preserving process utilizes sugar rather than heat as the preserving agent. The preparation operations are the same as in canning, but cooking is done in kettles and the product is ordinarily packaged in glass. In preserving, considerable quantities of stored and frozen fruits are used, and the extremely seasonal aspect of most canning plants thus removed.

Pickling consists of three main operations following the preparation of the fruit or vegetables - salting to preserve the pickles or other vegetables or fruit, processing to remove the salt when the goods are ready to be finished, and finishing by adding spices, vinegar, or salt to impart the flavor desired. Vinegar and salt act as the preserving agents.

Drying and dehydrating preserve fruits and vegetables by lowering the moisture content to an amount necessary to prevent the growth of micro-organisms. Dried fruits, having a high sugar content, do not present a serious packaging problem under ordinary conditions but the packaging of dehydrated vegetables has presented many difficulties. At the present time, most dehydrated vegetables are packed in special fiber containers or in hermetically sealed tins.

The quick-freezing and cold packing methods are used to preserve fruits and vegetables temporarily, through checking the growth of microbes by storage at low temperatures. In the quick-freeze method, the product is subjected to temperatures of zero degrees or lower for a short time, then stored at zero degrees to 15° Fahrenheit. Cold packed products are slow-frozen through storage at temperatures ranging from zero to 30°, without the initial quick-freezing.

Chemical preservatives, which act as a micro-organism poison, are used to a limited extent only, as all but benzoic and sulfurous acids are prohibited in the United States.

Summary Statistics

According to the Census of Manufactures, there were 3,358 establishments employing a yearly average of 146,800 persons, exclusive of firm members

and salaried officers of corporations, in the Canned Fruits and Vegetables and Related Products Industry in 1939. These employees were paid $116 millions in wages and salaries. Value of products for the industry was, as Table 1 shows, $953 millions.

In the canned and dried fruits and vegetables branch there were 2,016 establishments, not counting those with output of less than $5,000 per year, producing approximately $636 millions in value of products. Included in this amount were $256 millions of canned vegetables, $123 millions of canned fruit in continental United States, $48 millions of canned pineapple and juice in Hawaii, $76 millions of canned soups, $54 millions of dried fruits, and $24 millions of fruit juices.

Preserves, jams, jellies and fruit butters were made in 180 plants which had a value of products of $38 millions. Pickled fruits and vegetables and vegetable sauces and seasonings were made in 383 establishments in the amount of about $73 millions. Pickles accounted for $35 millions of this volume, and tomato catsup $23 millions.

One hundred and thirty-four establishments were engaged in the manufacture of salad dressings, with a value of products for the year of $49 millions. Vinegar and cider were manufactured in 132 establishments, with a volume of $7.5 millions. Flavoring extracts and syrups were made in 305 establishments with a total value of products of $140 millions.

In 1939, 36 establishments were quick freezing fruits and vegetables, with a value of products of $10 millions for approximately 213 million pounds. In 1941, however, the volume was estimated as 309 million pounds. Sales of dehydrated vegetables were only $521,713 in 1939, representing 5,640,340 pounds, but it is anticipated that approximately 150,000,000 pounds will be produced in the year ending June 30, 1943.

Canning and preserving of fresh fruits and vegetables is a highly seasonal industry, with great fluctuations of employment. Employment in the canned and dried fruits and vegetables branch in 1939 ranged from 47,952 wage earners in February to 238,870 in September. The average number of wage earners employed in this branch of the industry in 1939 was 105,922, while total employment, excluding salaried officials, was 116,185.

An average of 3,766 wage earners was employed in the preserves, jams, jellies and fruit butters branch during 1939, while employment in the maximum month was 4,691. The pickled fruits and vegetables branch employed 9,912 wage earners on the average, with 18,325 wage earners in the month of maximum employment. Quick-frozen fruits and vegetables required an average of 2,640 wage earners during 1939, although in the maximum month 4,975 were employed. The salad dressings branch is not as seasonal, 2,556 wage earners being employed on the average with 2,805 employed in the maximum month. The flavoring extracts and syrups branch, also not highly seasonal, gave employment to an average of 3,589 wage earners, whereas 4,134 were employed in the maximum month. The vinegar and cider branch employed an average of 1,059 wage earners with 1,846 in the maximum month.

Location of Industry

Canned fruits and vegetables and related products establishments are located in 45 of the 48 States, but there is a marked concentration in several areas. As the accompanying map shows, the major part of the industry is located

Table 1 Canned fruits and vegetables and related products industry: Summary statistics 1931 - 1939 (continued)

Census Year		Number of establishments	Wage earners (average for the year)	Wages	Cost of materials a/	Value of products	Value added by manufacture
1939	Total-all branches b/	3,358	129,444	$89,063,429	$548,636,478	$953,193,405	$404,556,927
	Canned and dried fruits and vegetables	2,016	105,922	69,787,468	380,742,613	635,883,830	255,141,217
	Preserves, jams, jellies and fruit butters	180	3,766	3,150,817	26,769,175	38,177,035	11,407,860
	Pickled fruits and vegetables	383	9,912	7,394,143	42,635,063	72,675,612	30,040,549
	Salad Dressings	134	2,556	2,433,965	37,873,069	48,941,846	11,068,777
	Quick-frozen foods	36	2,640	1,656,025	6,182,735	10,107,442	3,924,707
	Flavoring extracts and syrups	477	3,589	3,764,360	50,167,843	139,901,840	89,733,997
	Vinegar and cider	132	1,059	876,651	4,265,980	7,505,800	3,239,820
1937	Total-all branches	3,287	142,200	97,748,007	548,615,598	913,251,856	364,636,258
	Canned and dried fruits and vegetables	2,213	119,379	78,200,940	390,930,484	629,882,191	238,951,707
	Preserves, jams, jellies and fruit butters	146	4,582	3,769,233	29,020,070	41,313,568	12,293,498
	Pickled fruits and vegetables	279	8,653	6,814,312	36,807,757	63,689,480	26,881,723
	Salad dressings	113	2,487	2,521,606	36,914,941	45,901,355	8,986,414
	Quick-frozen foods	21	1,963	1,332,131	4,888,463	8,140,846	3,252,383
	Flavoring extracts and syrups	398	4,162	4,274,145	46,279,888	117,897,193	71,617,305
	Vinegar and cider	117	974	835,640	3,773,995	6,427,223	2,653,228
1935	Total-all branches	3,276	120,237	74,265,287	443,186,704	726,037,047	282,850,343
	Canned and preserved fruits and vegetables c/	2,744	116,298	70,612,276	409,240,926	649,644,032	240,403,106
	Flavoring extracts and syrups	407	2,902	2,651,066	29,185,230	67,874,935	38,689,705
	Vinegar and cider	125	1,037	1,001,945	4,760,548	8,518,080	3,757,532

Table 1 Canned fruits and vegetables and related products industry: Summary statistics 1931 - 1939 (concluded)

Census Year		Number of establishments	Wage earners (average for the year)	Wages	Cost of materials a/	Value of products	Value added by manufacture
1933	Total-all branches	2,576	87,405	48,146,281	292,696,166	500,787,660	208,091,494
	Canned and preserved fruits and vegetables c/	2,072	84,274	45,238,889	268,419,882	439,988,206	171,568,324
	Flavoring extracts and syrups	383	2,287	2,183,847	20,333,119	54,168,946	33,835,827
	Vinegar and cider	121	844	723,545	3,943,165	6,630,508	2,687,343
1931	Total-all branches	3,298	86,236	61,764,116	374,828,894	639,744,868	264,915,974
	Canned and preserved fruits and vegetables c/	2,535	80,184	54,001,402	322,004,905	513,001,043	190,996,138
	Flavoring extracts and syrups d/	626	5,204	6,877,268	48,575,303	119,237,816	70,662,513
	Vinegar and cider	137	848	885,446	4,248,686	7,506,009	3,257,323

Source: Bureau of the Census, Census of Manufactures

a/ Includes materials, supplies, containers, fuel and purchased electric energy.

b/ Hawaii included only in 1939. All other years are exclusive of Hawaii.

c/ Includes canned and dried fruits and vegetables; preserves, jellies and fruit butters; pickles and sauces; and salad dressings.

d/ Data for 1931 includes malt extracts and syrups, and hence are not comparable with data for other years.

Table 2. Canned fruits and vegetables and related products industry: Products by kind, quantity, and value for the U. S., 1939 and 1937 (000 omitted)

	1939		1937	
	Quantity	Value	Quantity	Value
Canned and dried fruits and vegetables		$600,623 a/		$563,625
Canned vegetables (cases)	154,765	256,379	169,581	296,924
Canned fruits (cases)	50,930	123,208	51,076	141,248
Canned fruit juices (cases)	15,513	22,189	12,688	25,218
Canned soups (cases)	28,692	78,464	21,231	63,384
Other canned foods	1,649	2,689	649	2,043
Fruit juices in bulk (gallons)	4,991	2,064	4,161	2,406
Dried fruits (tons)	569	53,656	580	61,804
Dried and dehydrated vegetables (pounds)	5,640	521	—	150
Olives (not canned)	—	7,766	—	6,287
Tomato pulp in bulk	—	350	—	144
Cold pack fruits	—	4,796	—	4,622
Hawaiian canned pineapple and juice (cases)	10,999 b/	48,541	12,203	59,395 c/
Preserves, jams, jellies and fruit butters		39,119		41,094
Preserves, jams, jellies, fruit butters (cases)	9,500 d/	35,857	9,150 d/	36,598
Maraschino cherries	—	3,262	—	4,496
Pickled fruits and vegetables, and seasonings		77,019		74,393
Pickles (bushels moved)	5,805 d/	35,009	4,837 d/	33,501
Tomato catsup (cases)	10,958	22,731	10,134	23,021
Kraut in bulk	—	2,102	—	2,509
Prepared horseradish	—	1,048	—	986
Prepared mustard	—	7,600	—	6,817
Tomato chili sauce (cases)	1,438	3,082	—	
Meat sauces	—	3,242	—	7,559
Other sauces	—	2,205	—	
Salad dressings		43,803		44,522
Cooked dressings	—	21,594	—	22,107
Mayonnaise	—	18,936	—	19,742
Other dressings	—	3,273	—	2,673
Quick-frozen foods		12,036		9,094
Quick-frozen fruits (pounds)	140,618	4,899	—	4,476
Quick-frozen vegetables (pounds)	72,577	7,137	—	4,618
Flavoring extracts and syrups		147,646		126,769
Flavoring extracts	—	25,064	—	23,820
Flavoring syrups	—	93,212	—	76,417
Crushed fruit for fountain use	—	4,469	—	4,428
Flavoring concentrates	—	15,485	—	9,840
Flavoring pastes, powders, and fruit juices	—	6,198	—	8,298
Colors	—	3,218	—	3,966
Vinegar and cider		12,910		11,504
Fermented vinegar (gallons)	61,057	6,785	—	5,800
Distilled vinegar (gallons)	45,984	4,508	—	4,130
Cider (gallons)	12,618	1,617	—	1,574
Miscellaneous products				
Peanut butter (pounds)	156,896	16,668	148,490	16,796
Mincemeat (pounds	30,848	3,140	32,992	3,366
Chili con carne, tamales, and ravioli	—	4,634	—	4,325
Pectin	—	2,801	—	—
Honey (pounds)	181,332 d/	11,000 d/	113,727 d/	11,000 d/
Canned puddings	—	923	—	943
Health foods		13,320		8,430

Source: Bureau of the Census, Census of Manufactures.

a/ Does not include products not classified in this branch of the industry, even though made by firms in the branch: hence is different from the value of products as shown in the summary tables.

b/ Data from Pineapple Producers Coop. Association. Trade sources estimate 6,500,000 cases of juice in 1939 and 10,000,000 in 1937.

c/ Estimated. This figure is the same as the exports of canned pineapple and juice in 1937

d/ Data from Western Canner and Packer Yearbook.

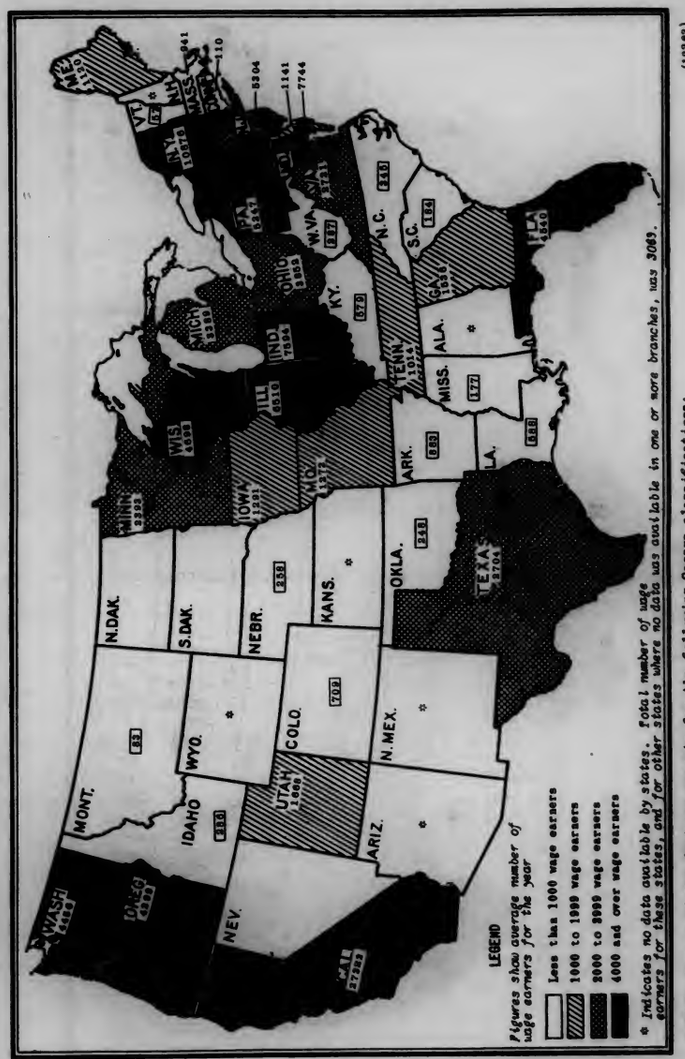
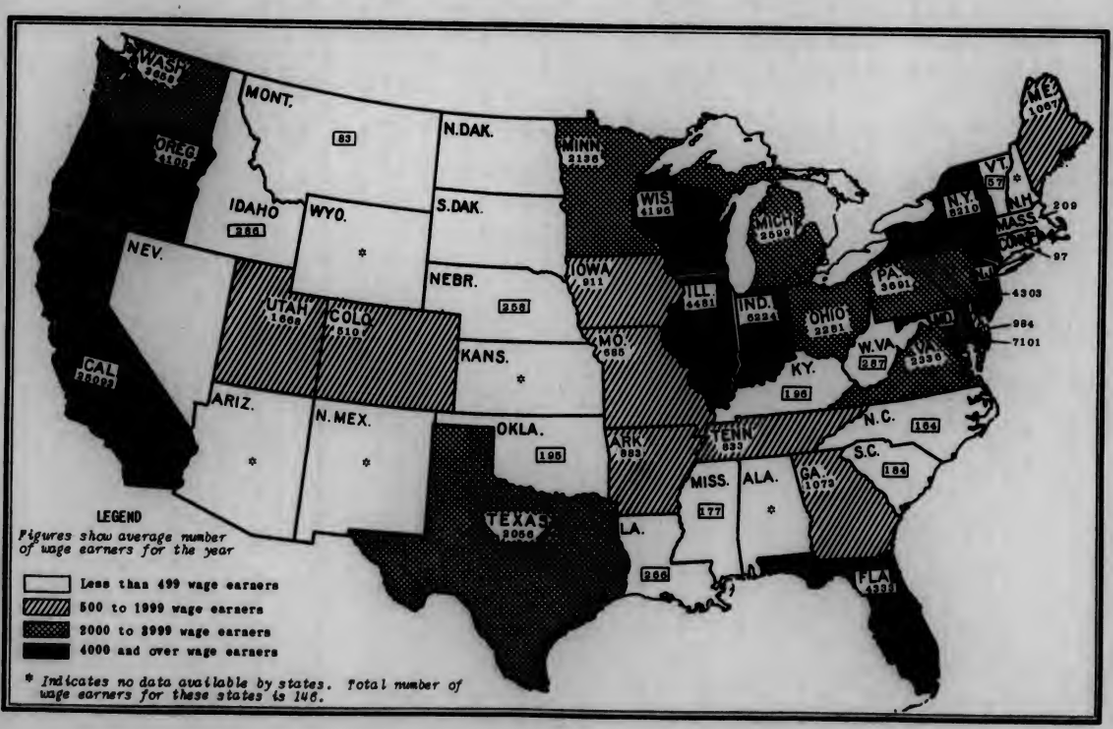


Chart 1. Canned fruits and vegetables and related products industry: Average number of wage earners, by state, 1939

(19282)

SOURCE: Census of Manufactures reports for the following Census classifications:
Canned and dried fruits and vegetables
Preserves, jams, jellies, and fruit butters
Pickled fruits & vegetables & seasonings
Salad dressings
Quick-frozen foods
Flavoring extracts and flavoring syrups
Vinegar and cider

Chart 2. Canned and dried fruits and vegetables branch: Average number of wage earners, by states, 1939



(12262)

SOURCE: Bureau of the Census, *Census of Manufactures*

on the Pacific Coast, the area north of the Ohio and Potomac rivers, and Florida.

In the canned and dried fruits and vegetables branch of the industry, according to the 1939 Census, 31 percent of the 106,000 wage earners were on the Pacific Coast, almost 24 percent in California alone. Approximately one-fourth of the California total consists of dried fruit workers and the balance canning workers. As Table 3 shows, the most important States other than Pacific Coast were New York with 7.8 percent of the wage earners, Maryland with 6.7 percent, Indiana with 5.9 percent, and Illinois, Florida, New Jersey and Wisconsin each with slightly more than 4 percent. Hawaii, canning pineapple only, had 7.5 percent of the total number of wage earners in this branch.

The eleven States of the Pacific Coast, East North Central and Middle Atlantic groups contained 65 percent of the wage earners in the canned and dried fruits and vegetables branch of the industry, and if Maryland, Florida, Virginia, Minnesota, Texas and Hawaii be added to these, 89 percent of the wage earners will be found in the 16 most important States and Hawaii. The canned and dried fruits and vegetables branch employed approximately 82 percent of the total number of wage earners in the industry. Establishments were located in 44 States.

The preserves, jams, jellies and fruit butters branch is concentrated, as Table 4 shows, in New York with 15.6 percent of the 3,800 wage earners, California with 13.4 percent, Illinois 13.1 percent and Pennsylvania 9.9 percent, according to the 1939 Census. This branch constituted approximately 3 percent of the total number of wage earners covered by this report.

The pickled fruits and vegetables branch, constituting about 8 percent of the number of wage earners covered by this report, had establishments located in 35 States. In 1939, 37.5 percent of the 9,900 wage earners were in the East North Central States, about 33 percent in the Middle and South Atlantic States, and about 10 percent in the Pacific Coast States. Ohio had 10.8 percent of the total, Pennsylvania 8.7 percent, California 8.4 percent, Illinois 7.9 percent and Indiana 7.7 percent.

Salad dressings are made in 30 States and the District of Columbia, but in 1939, 21 percent of the 2,500 wage earners were in Indiana, 15 percent in New York, and 8 percent in Illinois. This branch of the industry contained 2 percent of the employees in the industry.

Detailed statistics on the quick-frozen foods branch, which employed 2 percent of the wage earners covered, were not available. There were frozen food establishments in 14 States in 1939. Washington employed 21 percent of the wage earners in this branch, California 6 percent and New York 4 percent.

The flavoring extracts and flavoring syrups branch produced a value of products approximately one-fourth that of canned and dried fruits and vegetables in 1939, but it employed only about 3,600 wage earners, approximately 3 percent of the total in the industry. New York employed 21.4 percent of the wage earners in this branch, California 14.7 percent and Illinois 13 percent. The balance was spread over 32 States and the District of Columbia.

The vinegar and cider branch, employing less than 1 percent of the total number of wage earners in the industry, had establishments in 31 States. The most important States were New York with 11 percent, Virginia with about 10 percent and Illinois with 7.5 percent.

Table 3. Canned and dried fruits and vegetables branch: Employment, value of products, and number of establishments, by geographic divisions and states 1939

	Number of establishments	Average number of wage earners	Percent of total wage earners	Number of wage earners in maximum month a/	Value of Products	Percent of total value of products
United States	2,016	105,922	100.0	238,941	$635,883,830	100.0
New England c/	58	1,480	1.4			
Maine	43	1,057	1.0	3,680	6,482,588	1.0
Vermont	5	57	0.1	298	253,280	g/
Massachusetts	7	209	0.2	394	b/	b/
Connecticut	3	97	0.1	217	b/	b/
Middle Atlantic	232	16,204	15.3			
New York	152	8,210	7.7	18,676	55,137,396	8.7
New Jersey	16	4,303	4.1	8,268	b/	b/
Pennsylvania	64	3,691	3.5	6,820	32,836,381	5.2
East North Central	445	19,781	18.7		119,092,429	18.7
Ohio	84	2,261	2.2	9,107	10,035,902	1.6
Indiana	140	6,224	5.9	23,428	26,521,364	4.2
Illinois	48	4,481	4.2	10,433	47,973,082	7.5
Michigan	51	2,599	2.4	6,174	15,289,565	2.4
Wisconsin	122	4,196	4.0	14,243	19,272,516	3.0
West North Central d/	109	3,990	3.8			
Minnesota	25	2,136	2.0	8,733	9,425,657	1.5
Iowa	34	911	0.9	3,197	3,179,456	0.5
Missouri	46	835	0.7	3,019	766,131	0.1
Nebraska	4	258	0.2	560	b/	b/
South Atlantic	428	16,462	15.5			
Delaware	29	934	0.9	4,047	3,828,233	0.5
Maryland	191	7,101	6.7	21,111	27,302,603	4.3
Virginia	100	2,336	2.2	7,482	6,455,606	1.0
West Virginia	17	287	0.3	995	b/	b/
North Carolina	8	154	0.1	434	b/	b/
South Carolina	12	134	0.2	734	289,512	g/
Georgia	21	1,073	1.0	3,566	2,046,093	0.3
Florida	50	4,333	4.1	7,921	15,187,750	2.4
East South Central e/	43	1,206	1.1		3,825,048	0.6
Kentucky	12	196	0.2	1,214	255,021	g/
Tennessee	24	833	0.8	2,823	2,945,792	0.5
Mississippi	7	177	0.1	669	624,235	0.1
West South Central	110	3,400	3.2			
Arkansas	40	803	0.8	1,657	2,531,469	0.4
Louisiana	12	266	0.3	627	787,532	0.1
Oklahoma	4	195	0.2	541	b/	b/
Texas	54	2,036	1.9	4,633	9,791,996	1.5
Mountain f/	63	2,547	2.4		9,462,268	1.5
Montana	3	83	0.1	367	320,658	0.1
Idaho	11	286	0.3	474	690,015	0.1
Colorado	18	510	0.5	1,890	2,057,599	0.3
Utah	29	1,668	1.5	4,876	6,393,896	1.0
Pacific	511	32,856	31.0		213,895,534	33.6
Washington	78	3,658	3.4	10,278	19,700,116	3.1
Oregon	70	4,105	3.9	12,058	22,602,469	3.5
California	363	25,093	23.7	67,633	171,592,949	27.0
Hawaii	9	7,900	7.5	18,251	48,540,906	7.6
Other	8	146	0.1	b/	b/	b/

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Month of maximum employment varies in different states; total for United States is not the sum of numbers shown for States.
b/ No data available.
c/ Does not include New Hampshire, 1 establishment.
d/ Does not include Kansas, 1 establishment.
e/ Does not include Alabama, 1 establishment.
f/ Does not include Wyoming, 1 establishment; New Mexico, 2; Arizona, 2.
g/ Less than 0.1 percent.

(12,317)

Table 4. Preserves, jams, jellies and fruit butters branch; Employment, value of product, and number of establishments, by geographic divisions and states, 1939.

	Number of establishments	Average number of wage earners	Percent of total wage earners	Number of wage earners in maximum month a/	Value of product	Percent of total value of products
United States	180	3,766	100.0	4,691	$38,177,035	100.0
New England b/	19	282	7.5			
Massachusetts	18	282	7.5	528	4,560,384	11.9
Middle Atlantic	35	1,121	29.8			
New York	26	587	15.6	812	6,176,301	16.2
New Jersey	5	162	4.3	194	2,130,127	5.6
Pennsylvania	4	372	9.9	632	g/	
East North Central c/	30	890	23.6			
Ohio	5	313	8.3	459	3,180,243	8.3
Indiana	4	37	1.0	41	163,220	0.4
Illinois	17	493	13.1	623	4,503,703	11.8
Michigan	4	47	1.2	65	461,035	1.3
West North Central	9	220	5.8			
Minnesota	4	75	2.0	90	g/	
Missouri	5	145	3.8	184	1,948,464	5.1
South Atlantic d/	15	108	2.9			
Florida	15	108	2.9	201	450,178	1.2
East South Central e/	7	224	5.9			
Kentucky	4	217	5.8	267	1,536,860	4.0
Tennessee	3	7	0.2	7	82,305	0.2
West South Central	5	74	2.0			
Texas	5	74	2.0	135	641,465	1.7
Pacific	39	588	15.6			
Washington	4	62	1.6	127	616,746	1.6
Oregon	4	21	0.6	39	205,870	0.5
California	31	505	13.4	634	4,035,172	10.6
Hawaii	9	49	1.3	72	153,476	0.4
Other f/	13	210	5.6	g/	g/	

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Month of maximum employment varies in different states; total for United States is not the sum of numbers shown for states.
b/ Does not include Maine, 1 establishment.
c/ Does not include Wisconsin, 1 establishment.
d/ Does not include Virginia, 1 establishment; West Virginia 1; Georgia 1; Maryland 2.
e/ Does not include Alabama, 1 establishment.
f/ Including Oklahoma, 2 establishments; Colorado 2; Utah 1.
g/ Data not available.

(12,317)

Table 5. Pickled fruits and vegetables, and vegetable sauces and seasonings branch: Employment, value of products and number of establishments, by geographic divisions and states, 1939

	Number of establishments	Average number of wage earners	Percent of total wage earners	Number of wage earners in maximum month a/	Value of products	Percent of total value of products
United States	383	9,912	100.0	18,325	$72,675,612	100.0
New England b/	14	177	1.8			
Massachusetts	11	144	1.5	160	1,080,556	1.5
Maine	3	33	0.3	39	c/	c/
Middle Atlantic	87	2,105	21.2			
New York	49	668	6.9	925	9,439,482	13.0
New Jersey	16	555	5.6	1,311	3,924,066	5.4
Pennsylvania	22	862	8.7	1,361	6,312,779	8.7
East North Central	120	3,717	37.5			
Ohio	29	1,075	10.8	3,599	9,353,959	12.9
Indiana	20	763	7.7	3,599	5,346,338	7.4
Illinois	32	784	7.9	1,113	5,287,729	7.3
Michigan	26	610	6.2	1,270	4,819,410	6.6
Wisconsin	13	485	4.9	622	3,651,169	5.0
West North Central c/	25	582	5.9			
Minnesota	7	115	1.2	168	c/	c/
Iowa	6	320	3.2	778	c/	c/
Missouri	12	147	1.5	167	847,887	1.2
South Atlantic d/	26	1,135	11.4			
Delaware	3	157	1.6	406	c/	c/
Maryland	9	417	4.2	487	2,194,989	3.0
Virginia	4	118	1.2	402	569,938	0.8
North Carolina	7	181	1.8	261	1,026,810	1.4
Georgia	3	262	2.6	c/	651,554	0.9
East South Central e/	5	166	1.7			
Kentucky	5	166	1.7	203	1,456,814	2.0
West South Central	25	493	5.0			
Louisiana	12	246	2.5	307	1,688,934	2.3
Texas	13	247	2.5	336	1,115,091	1.5
Mountain f/	7	179	1.8			
Colorado	7	179	1.8	365	1,019,566	1.4
Pacific	53	955	9.6			
Washington	8	43	0.4	61	222,461	0.3
Oregon	4	84	0.8	141	442,369	0.6
California	41	828	8.4	1,593	5,165,797	7.1
Hawaii	6	4	h/	4	38,234	0.1
Other	15	399	4.0	c/	c/	c/

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Month of maximum employment varies in different states; total for United States is not the sum of numbers shown for states.
b/ Does not include Connecticut 2 establishments.
c/ Does not include Nebraska 2 establishments; Kansas 2.
d/ Does not include South Carolina 1 establishment.
e/ Does not include Alabama 2 establishments; Mississippi 1; Tennessee 1.
f/ Does not include Arizona 2 establishments; Montana 1; Utah 1.
g/ No data available.
h/ Less than 0.1 percent.

(12,317)

Table 6. Salad dressings branch Employment, value of products, and number of establishments, by geographic divisions and states, 1939

	Number of establishments	Average number of wage earners	Percent of total wage earners	Number of wage earners in maximum month a/	Value of products	Percent of total value of products
United States	134	2,556	100.0	2,805	48,941,846	100.0
New England b/	4	79	3.1			
Massachusetts	4	79	3.1	93	c/	c/
Middle Atlantic	23	579	22.7			
New York	13	393	15.4	429	9,077,613	18.5
New Jersey	3	98	3.8	109	c/	c/
Pennsylvania	7	88	3.4	96	755,021	1.5
East North Central c/	13	774	30.3			
Ohio	3	25	1.0	28	c/	c/
Indiana	4	543	21.2	599	c/	c/
Illinois	6	206	8.1	265	c/	c/
West North Central d/	8	132	5.2			
Iowa	3	34	1.3	44	c/	c/
Missouri	5	98	3.9	136	1,092,179	2.2
South Atlantic e/	11	234	9.2			
Maryland	3	70	2.7	81	1,116,086	2.3
Georgia	3	85	3.3	89	c/	c/
Florida	5	79	3.1	97	806,161	1.6
West South Central	27	270	10.6			
Louisiana	3	41	1.6	44	c/	c/
Oklahoma	6	53	2.1	65	596,110	1.2
Texas	18	176	6.9	193	3,643,217	7.4
Pacific	29	247	9.7			
Washington	6	67	2.6	78	c/	c/
Oregon	5	41	1.6	44	316,127	0.6
California	18	139	5.5	143	3,820,132	7.8
Other f/	19	241	9.4	c/	c/	c/

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Month of maximum employment varies in different states, total for U. S. is not the sum of numbers shown for states.
b/ Does not include Rhode Island 2 establishments; Connecticut 1.
c/ Does not include Michigan 2 establishments.
d/ Does not include Minnesota 2 establishments; Kansas 2.
e/ Does not include District of Columbia 1 establishment; North Carolina 1; South Carolina 1.
f/ Includes Alabama 2 establishments; Colorado 1; Kentucky 1; Tennessee 2; Utah 1.
g/ No data Available.

(12,317)

Table 7. Flavoring extracts and flavoring syrups, not elsewhere classified branch: a/ Employment, value of products, and number of establishments, by geographic divisions and states, 1939

	Number of establishments	Average number of wage earners	Percent of total wage earners	Number of wage earners in maximum month i/	Value of products	Percent of total value of products
United States	477	3,589	100.0	4,134	$139,901,840	100.0
New England b/	36	185	5.2			
Maine	6	20	0.6	21	h/	h/
Massachusetts	24	155	4.3	170	2,296,525	1.6
Rhode Island	6	10	0.3	11	247,361	0.2
Middle Atlantic	151	1,019	28.4			
New York	112	769	21.4	830	27,009,226	19.3
New Jersey	17	130	3.6	165	h/	h/
Pennsylvania	22	120	3.4	141	4,199,137	3.0
East North Central	108	731	20.4			
Ohio	25	158	4.4	177	2,696,281	1.9
Indiana	9	27	0.8	44	461,875	0.3
Illinois	48	468	13.0	671	21,441,680	15.3
Michigan	17	61	1.7	75	1,476,511	1.1
Wisconsin	9	17	0.5	18	378,257	0.3
West North Central c/	43	290	8.1			
Minnesota	11	67	1.9	76	1,158,507	0.8
Iowa	6	26	0.7	30	447,135	0.3
Missouri	26	197	5.5	221	9,478,472	6.8
South Atlantic d/	31	454	12.6			
Maryland	8	156	4.3	166	h/	h/
Georgia	10	116	3.2	130	h/	h/
Florida	5	20	0.6	81	217,352	0.2
Virginia	8	162	4.5	170	1,890,418	1.4
East South Central e/	11	152	4.2			
Tennessee	8	127	3.5	165	1,587,015	1.1
Alabama	3	25	0.7	26	h/	h/
West South Central f/	20	147	4.1			
Louisiana	4	35	1.0	36	h/	h/
Texas	16	112	3.1	127	8,466,114	6.1
Mountain g/	5	8	0.2			
Colorado	5	8	0.2	9	132,591	0.1
Pacific	58	584	16.3			
Washington	6	23	0.6	31	h/	h/
Oregon	6	34	1.0	34	313,960	0.2
California	46	527	14.7	702	12,528,833	9.0
Other	14	19	0.5	h/	h/	h/

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Includes only firms primarily engaged in the manufacture of flavoring extracts and syrups. Does not include chocolate syrup, corn syrup, malt extracts and syrup.

b/ Does not include Vermont, 1 establishment.

c/ Does not include Kansas, 1 establishment; Nebraska 2.

d/ Does not include District of Columbia, 1 establishment; North Carolina 2.

e/ Does not include Kentucky, 2 establishments.

f/ Does not include Oklahoma, 1 establishment, Arkansas 1.

g/ Does not include Utah, 2 establishments; Arizona 1.

h/ No data available.

i/ Month of maximum employment varies in different states; total for United States is not the sum of numbers shown for states.

Table 8. Vinegar and cider branch: Employment, value of products, and number of establishments, by geographic divisions and states, 1939.

	Number of establishments	Average number of wage earners	Percent of total wage earners	Number of wage earners in maximum month i/	Value of products	Percent of total value of products
United States	132	1,059	100.0	1,846	$7,505,800	100.0
New England a/	12	85	8.0			
Massachusetts	9	72	6.8	119	437,969	5.8
Connecticut	3	13	1.2	38	49,816	0.7
Middle Atlantic	30	201	19.0			
New York	22	118	11.1	316	872,801	11.6
New Jersey	4	56	5.3	82	381,111	5.1
Pennsylvania	4	27	2.6	30	194,278	2.6
East North Central b/	17	151	14.3			
Illinois	7	79	7.5	138	780,696	10.4
Michigan	10	72	6.8	150	486,170	6.5
South Atlantic c/	5	105	9.9			
Virginia	5	105	9.9	260	453,893	6.0
East South Central d/	7	67	6.3			
Tennessee	4	47	4.4	67	299,297	4.0
Alabama	3	20	1.9	26	146,554	2.0
West South Central e/	6	39	3.7			
Texas	6	39	3.7	53	301,099	4.0
Mountain f/	3	12	1.1			
Colorado	3	12	1.1	18	h/	h/
Pacific	24	126	11.9			
Washington	7	45	4.3	117	370,583	4.9
Oregon	4	14	1.3	46	69,519	0.9
California	13	67	6.3	125	545,004	7.3
Other g/	28	273	25.8	h/	h/	h/

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Does not include Maine, 1 establishment; New Hampshire 1.

b/ Does not include Ohio, 2 establishments; Indiana 2; Wisconsin 1.

c/ Does not include Maryland, 2 establishments; West Virginia 1; North Carolina 1.

d/ Does not include Kentucky, 1 establishment.

e/ Does not include Arkansas, 4 establishments; Oklahoma 1.

f/ Does not include Idaho, 1 establishment.

g/ Including Minnesota, 1 establishment; Iowa 1; Missouri 6; Kansas 2.

h/ No data available.

i/ Month of maximum employment varies in different states; total for U. S. is not the sum of numbers shown for states.

Table 9. Quick-frozen foods branch: Employment, value of products, and number of establishments, by geographic divisions and states, 1939

	Number of establishments	Average number of wage earners	Percent of total wage earners	Number of wage earners in maximum month a/	Value of products	Percent of total value of products
United States	36	2,640	100.0	4,975	10,107,442	100.0
Middle Atlantic	7	198	7.5			
New York	4	111	4.2	424	433,142	4.3
Pennsylvania	3	87	3.3	412	c/	c/
Pacific	16	722	27.3			
Washington	10	558	21.1	1,196	2,630,320	26.0
California	6	164	6.2	347	773,998	7.7
Other b/	13	1,720	65.2	c/	c/	c/

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Month of Maximum employment varies in different states; total for U. S. is not the sum of numbers shown for states.

b/ Alabama 1 establishment; Florida 1; Louisiana 1; Maine 2; Maryland 1; New Jersey 1; Oregon 2; Texas 1; Utah 1; Virginia 2.

c/ No data available.

Many plants manufacture some products not classified in the branch to which the plant is assigned by the Census, thus precluding exact figures for each branch. Those commodities not classified as products of the branch in which they are produced, however, generally belong in some other branch of the industry, since all of the branches are related. Most of the miscellaneous products not included by the census in any of the branches, moreover, are made in plants in more than one branch. For example, peanut butter and mincemeat are made in canning plants, preserving plants, pickling plants, and salad dressing plants.

Plants canning fruits and vegetables are most often located in small towns rather than large cities. In 1937, according to a study made by the Women's Bureau of 537 canneries,1/ 57 percent were in rural areas with a population under 2,500, 24 percent in towns of 2,500 to 10,000 population, 11 percent in the 10,000 to 100,000 group and 8 percent in cities of 100,000 and over. While the rural areas under 2,500 population had but 28 percent of the production, the cities over 100,000 produced more than 23 percent of the volume.

In Virginia, 93 percent of the plants covered by the Women's Bureau survey were in rural areas, while in Arkansas 79 percent and in Indiana 70 percent were so situated. From 60 to 64 percent of the canneries in Wisconsin, Maryland, and New York were in rural locations, while in California, Ohio, Washington and Pennsylvania only one-fourth or less were in such areas.

Size of Establishments

The canned fruits and vegetables branch of the industry is typically one of medium-sized plants, even though, as Table 10 shows, 38 percent of the production is concentrated in the 38 largest establishments in the branch. In 1939, 46 percent of the 2,007 establishments in the industry in continental United States produced between $50,000 and $500,000 of canned foods - roughly 35,000 to 350,000 cases - and an additional 43 percent of the establishments produced between $5,000 and $50,000 per year. 2/

In the preserves, jams, and jellies branch of the industry, the 21 largest establishments, representing 12 percent of the 171 plants, produced 51 percent of 1939 output. The rest of the production was spread rather evenly through the other size groups, as Table 11 shows.

The 19 largest establishments in the pickled fruits and vegetables branch, comprising only 5 percent of the 377 plants, produced 41 percent of the products in 1939. Approximately 46 percent of the establishments, however, were in the $5,000 to $50,000 per year class.

The salad dressings branch is dominated by large establishments, the 19 largest of the 134 plants in this field producing 79 percent of the products in 1939. The three largest establishments, all selling more than $5,000,000 each per year, produce probably 60 percent of the total. There are, however, many small establishments in this branch, as Table 13 shows.

While 59 percent of the 477 establishments in the flavoring extracts and flavoring syrups branch produced between $5,000 and $50,000 per year, 58

1/ Op. Cit. p. 54.

2/ Computed on the basis of 70 cents per dozen cans.

Table 10. Canned and dried fruits and vegetables branch: Distribution of establishments, and proportion of wages to value of products, by size of establishment, 1939

Size of establishment according to value of products	Number of establishments	Average number of wage earners	Wages (in thousand dollars)	Value of products (in thousand dollars)	Percent wages to value of product
$ 5,000 to 19,999	446	3,429	795	4,985	15.9
20,000 to 49,999	410	6,188	1,914	13,823	13.8
50,000 to 99,999	323	7,311	2,855	22,891	12.5
100,000 to 249,999	391	15,163	7,421	61,751	12.0
250,000 to 499,999	208	14,797	8,759	74,071	11.8
500,000 to 999,999	123	15,419	10,656	88,545	12.0
1,000,000 to 2,499,999	68	13,984	11,242	96,463	11.7
2,500,000 to 4,999,999	31	13,062	11,782	101,652	11.6
5,000,000 and over	7	8,669	9,811	123,162	8.0
Total	2,007	98,022	65,235	587,343	11.1

Source: Bureau of the Census, Census of Manufactures, 1939

Table 11. Preserves, jams, jellies and fruit butters branch: Distribution of establishments, and proportion of wages to value of products, by size of establishment, 1939

Size of establishment according to value of products	Number of establishments	Average number of wage earners	Wages (in thousand dollars)	Value of products (in thousand dollars)	Percent wages to value of product
$ 5,000 to 19,999	38	117	64	502	12.7
20,000 to 49,999	28	175	100	963	10.4
50,000 to 99,999	24	257	180	1,647	10.9
100,000 to 249,999	32	503	423	5,302	8.0
250,000 to 499,999	28	861	771	10,286	7.5
500,000 to 999,999	15	1,180	965	11,052	8.7
1,000,000 to 2,499,999	6	664	623	8,274	7.5
Total	171	3,717	3,126	38,026	8.2

Source: Bureau of the Census, Census of Manufactures, 1939

(12,317)

Table 12. Pickled fruits and vegetables and vegetable sauces and seasonings branch: Distribution of establishments, and proportion of wages to value of products, by size of establishment, 1939

Size of establishment according to value of products	Number of establishments	Number of Wage Earners	Wages (in thousand dollars)	Value of products (in thousand dollars)	Percent wages to value of product
$ 5,000 - 19,999	91	211	144	1,125	12.8
20,000 - 49,999	83	511	308	2,616	11.8
50,000 - 99,999	58	611	435	4,205	10.4
100,000 - 249,999	74	2,176	1,430	11,650	12.3
250,000 - 499,999	35	1,713	1,326	12,080	11.0
500,000 - 999,999	17	1,634	1,151	11,112	10.4
1,000,000 - 2,499,999	17	3,052	2,599	29,849	8.7
2,500,000 - 4,999,999	2				
Total	377	9,908	7,393	72,637	10.2

Source: Bureau of the Census, Census of Manufactures, 1939

Table 13. Salad dressings branch: Distribution of establishments, and proportion of wages to value of products, by size of establishment, 1939

Size of establishment according to value of products	Number of establishments	Number of wage Earners	Wages (in thousand dollars)	Value of products (in thousand dollars)	Percent wages to value of products
$ 5,000 - 19,999	33	51	30	386	7.8
20,000 - 49,999	28	77	61	815	7.5
50,000 - 99,999	18	118	109	1,313	8.3
100,000 - 249,999	25	272	214	3,561	6.0
250,000 - 499,999	11	359	300	3,994	7.5
500,000 - 999,999	11				
1,000,000 - 2,499,999	4				
2,500,000 - 4,999,999	1	1,679	1,720	38,873	4.4
5,000,000 - and over	3				
Total	134	2,556	2,434	48,942	5.0

Source: Bureau of the Census, Census of Manufactures, 1939

(12,317)

Table 14. Flavoring extracts and syrups branch: Distribution of establishments, and proportion of wages to value of products, by size of establishment, 1939

Size of establishment according to value of products	Number of establishments	Number of wage earners	Wages (in thousand dollars)	Value of products (in thousand dollars)	Percent wages to value of products
$ 5,000 to 19,999	182	204	187	1,927	9.7
20,000 to 49,999	100	220	233	3,185	7.3
50,000 to 99,999	69	362	330	5,152	6.4
100,000 to 249,999	58	475	488	8,977	5.4
250,000 to 449,999	29	578	544	10,148	5.4
500,000 to 999,999	14	358	435	9,400	4.6
1,000,000 to 1,249,999	14	836	761	19,511	3.9
2,500,000 to 4,999,999	1	556	786	81,602	1.0
5,000,000 and over	10				
Total	477	3,589	3,764	139,902	2.7

Source: Bureau of the Census, Census of Manufactures, 1939

Table 15. Vinegar and cider branch: Distribution of establishments, and proportion of wages to value of products, by size of establishment, 1939

Size of establishment according to value of products	Number of establishments	Number of wage earners	Wages (in thousand dollars)	Value of products (in thousand dollars)	Percent wages to value of products
$ 5,000 to 19,999	47	103	74	502	14.8
20,000 to 49,999	36	183	143	1,200	11.9
50,000 to 99,999	27	248	233	1,877	12.4
100,000 to 249,999	20	525	426	3,927	10.9
250,000 to 449,999	2				
Total	132	1,059	876	7,506	11.7

Source: Bureau of the Census, Census of Manufactures, 1939

Table 16. Quick-frozen foods branch: Distribution of establishments, and proportion of wages to value of products, by size of establishment, 1939

Size of establishment according to value of products	Number of establishments	Number of wage earners	Wages (in thousand dollars)	Value of products (in thousand dollars)	Percent wages to value of products
$ 5,000 to 49,999	7	160	39	219	17.9
50,000 to 99,999	11	273	113	802	14.0
100,000 to 249,999	9	507	203	1,577	12.9
250,000 to 449,999	4	316	206	1,364	15.1
500,000 to 999,999	3	1,384	1,095	6,145	17.8
1,000,000 to 2,499,999	2				
Total	36	2,640	1,656	10,107	16.4

Source: Bureau of the Census, Census of Manufactures, 1939

percent of the production in 1939 was concentrated in the 11 largest plants. Ten establishments produced more than $5,000,000 each per year.

Vinegar and cider is typically produced in small and medium-sized plants, only two of the 132 plants in 1939 producing more than $250,000 per year. Production is concentrated, however, in plants producing more than $100,000 per year, 52 percent of the value of products being made in the 22 firms in this size group.

Channels of Distribution

Wholesalers and jobbers constitute the primary channel through which the industry markets its products. In 1939, the canned and dried fruits and vegetables branch sold 57 percent of its products to this source (Table 17); pickled fruits and vegetables branch, 58 percent; preserves branch, 61 percent; quick frozen foods branch, 73 percent; flavoring extracts and syrups branch, 56 percent; and vinegar and cider branch, 83 percent. The salad dressings branch sold only 22 percent through this channel, as it marketed 64 percent through its own wholesale branches.

The canned and dried fruits and vegetables branch sold 21 percent of its products to or through its own wholesale branches and 14 percent direct to retailers and chain stores. The pickled fruits and vegetables branch sold 17 percent to or through its own wholesale branches and 20 percent to retailers and chain stores. Other branches of the industry sold but small amounts through their own wholesale branches.

Sales direct to retailers and chain stores accounted for 23 percent of the volume of the preserves branch, 16 percent of the frozen fruits branch and 13 percent of the salad dressings branch. Sales to industrial users were large only for the flavoring extracts and syrups branch with 30 percent of its volume going to this channel.

In negotiating sales, brokers and commission houses are widely used in the canned and dried fruits and vegetables branch, 39 percent of the sales in 1939 being made through these intermediaries and 56 percent of the establishments using this medium as their exclusive selling channel. (See Table 18.) The quick-frozen foods branch also utilizes brokers and commission houses to a great extent, 53 percent of its sales being made through them, and 52 percent of the establishments using them exclusively. Other branches of the industry use these agents to a lesser extent, the preserves branch selling 22 percent of its products in this manner, the pickled fruits and vegetables branch, 19 percent, and the vinegar and cider branch, 12 percent.

Trade Associations in the Industry

Almost every branch of the industry has a national trade association. Many branches of the industry have associations for sections of the industry as well, and in addition, many states and regions have local associations. Only the salad dressings and the vinegar and cider branches have no employer organizations.

The dominant organization among canners is the National Canners Association, which has a membership of approximately 825 processors. Every major canning state or region also has a local association, many of which are very active. Dried fruit producers have several organizations on the west coast,

Table 17. Canned fruits and vegetables and related products industry: Primary channels of distribution, by branches of the industry, 1939.
(Values expressed in thousands of dollars)

Channel of Distribution	All Classifications		Canned and dried fruits and vegetables, including canned soups		Pickled fruits and vegetables and vegetable sauces and seasonings		Preserves, jams jellies and fruit butters		Quick-frozen foods		Salad dressings		Flavoring extracts and syrups		Vinegar and cider	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
All Channels - total	909,261	100.0	594,197	100.0	74,148	100.0	39,407	100.0	9,314	100.0	50,983	100.0	133,452	100.0	7,760	100.0
Sales to or through own wholesale branches	177,379	19.5	123,956	20.9	12,531	16.9	2,666	6.8	c/		32,511	63.8	5,579	4.2	136	1.7
Sales to or through own retail stores	5,790	0.6	4,716	0.8	a/		a/		—		a/		1,074	0.8	—	
Sales to wholesalers and jobbers	507,087	55.8	340,860	57.4	43,151	58.2	23,980	60.8	6,796	73.0	11,328	22.2	74,533	55.9	6,439	83.0
Sales to retailers and chain stores for resale	126,193	13.9	83,085	13.9	15,228	20.5	9,201	23.3	1,474	15.8	6,613	13.0	9,920	7.4	672	8.7
Sales to industrial and institutional uses	55,211	6.1	8,143	1.4	1,931	2.6	3,218	8.2	992	10.6	531	1.0	39,931	29.9	465	6.0
Sales to consumers at retail	1,825	0.2	813	0.1	458	0.6	141	0.4	52	0.6	—		323	0.2	33	0.5
Sales to export intermediaries	13,898	1.5	11,832	2.0	485	0.7	201	0.5	—		—		1,370	1.1	10	0.1
Export sales direct to buyers in other countries	21,678	2.4	20,792	3.5	364	0.5	b/		—		—		722	0.5	—	

Source: Bureau of the Census, Census of Business, Distribution of Manufacturers' Sales, 1939

a/ Sales to retail stores combined with sales to or through own wholesale branches to avoid disclosure
b/ Direct export sales combined with sales to export intermediaries to avoid disclosure
c/ Sales to or through own wholesale branches combined with sales to wholesalers and jobbers to avoid disclosure

(12,317)

Table 18. Canned fruits and vegetables and related products industry: Sales negotiated through agents, brokers, and commission houses, by branches of the industry, 1939

(Values expressed in thousands of dollars)

	Total sales reported	Sales through agents, brokers, and commission houses (excluding manufacturer's own sales force)	Percent of Total Sales	Number of establishments reporting	Number of establishments selling exclusively through agents, brokers, and commission houses	Percent of total number of establishments
Canned and dried fruits and vegetables, including canned soups	594,197	230,665	38.8	1,054	587	55.7
Pickled fruits and vegetables and vegetable sauces and seasonings	74,148	14,122	19.0	101	10	9.9
Preserves, jams, jellies and fruit butters	39,407	8,627	21.9	44	4	9.1
Quick frozen foods	9,314	4,966	53.3	21	11	52.4
Salad dressings	50,983	1,960	3.8	18	--	--
Flavoring extracts and syrups	133,452	4,106	3.1	31	5	16.1
Vinegar and cider	7,760	933	12.0	18	1	5.6

Source: Bureau of the Census, Census of Business, Distribution of Manufacturers' Sales, 1939

(12,317)

and kraut and olive processors have independent organizations.

The National Dehydrators Association, with a membership containing about 75 percent of the operators, represents the dehydrating section of the industry. The National Association of Frozen Food Packers appears to be the principal Nation-wide association for fruit and vegetable freezers, although there are several other active organizations in this field.

The principal association in the preserves, jams and jellies branch is the National Preservers Association, which has about 125 members. In the pickled fruits and vegetables branch, the National Pickle Packers Association with approximately 100 members is the largest organization, but there are several other important groups. The Flavoring Extract Manufacturers Association of the United States, which is closely associated with other employer organizations in the branch, has a membership of about 175 producers and represents about 75 percent of the production of the branch.

Unionization of the Industry

Typical union contracts in the industry provide for rates higher than 40 cents per hour. In the wage survey conducted by the Wage and Hour Division it was found that only 6.6 percent of the employees reported as working in establishments having collective bargaining agreements earned less than 40 cents per hour. As Table 35 shows, it would require an increase of only 0.3 percent to bring these employees up to the 40 cent minimum.

In general, rates under collective bargaining agreements are higher on the Pacific coast than in the other sections of the country. For example, approximately 60,000 cannery workers in northern California, covered by the collective bargaining agreement of the National Council of Cannery and Process Workers, A. F. of L., are paid a minimum of 60 cents per hour for women and 73 cents per hour for men. A typical contract negotiated by the United Cannery, Agricultural, Packing and Allied Workers of America, CIO, in a California plant, calls for a minimum of 57½ cents per hour for women and 62½ cents per hour for men. Minimum rates of 51½ cents per hour for women and 63½ cents for men prevail in a Camden, New Jersey plant, and 44 cents per hour for women and 55 cents for men were established in a Colorado plant.

The Bureau of Labor Statistics estimates that the canned and preserved foods industry had a "moderate" proportion of wage earners under written agreements in 1941. Moderate may be interpreted in this case as roughly 25 percent of the total number of wage earners employed. The Wage and Hour survey, as Table 35 indicates, showed that while only 12 percent of the establishments surveyed operated under union agreements, these establishments employed over 21 percent of the wage earners. The United Cannery, Agricultural, Packing and Allied Workers of America claims 35,000 employees in the various branches of the industry, 1/ and the A. F. of L. 60,000 or 70 percent, of the workers in California alone. 2/

1/ Letter to Wage and Hour Division February 19, 1943.

2/ Food Products Journal, February 1942, p. 177.

Exports and Imports

According to the 1939 Census, 5.5 percent of the canned and dried fruits and vegetables produced in the United States were exported. Exports in the other branches of the industry were very small, ranging from 1.6 percent in flavoring extracts and syrups to none in quick-frozen foods, salad dressings, and vinegar and cider.

Canned fruits were the principal items exported in 1939, $25 million being shipped in that year. In 1940, the quantity of fruits exported dropped to $9 million. Exports of canned vegetables rose during the same period from $4.5 million in 1939 to $5.6 million for the first nine months of 1941.

Imports of canned fruits and vegetables have been confined chiefly to pineapple from sources other than Hawaii, and tomatoes. In 1939, total imports amounted to $6 million. Publication of data on imports and exports since September 1941 has been suspended for the duration of the war.

RECENT ECONOMIC AND COMPETITIVE DEVELOPMENTS IN THE INDUSTRY

Growth of the Industry.

The industry has shown a fairly steady growth in almost every branch during the past 20 years. The war has increased, rather than curtailed, activity generally throughout the industry.

Production of canned fruits and vegetables has increased from 84.7 million cases in 1919 to 165.1 million cases in 1929 and 250.8 million cases in 1939. Estimates for 1941 and 1942 are 265 million cases and 280 million cases respectively, the highest in history. 1/

Per capita consumption has also risen in this branch of the industry. Consumption of canned vegetables has increased from approximately 14 pounds per person in 1920 to over 25 pounds in 1941. Canned fruit consumption has risen from about 11 pounds per person in 1920 to over 19 pounds in 1941. 2/ The fruit juice section of the industry has grown greatly in the last 10 years, tomato juice production, for example, increasing from approximately 4 million cases in 1933 to 15 million cases in 1940 and 23 million cases in 1941. Grapefruit juice production increased from 2.6 million cases in 1934-35 to 9.7 million cases in 1939-40. 3/ Production of all fruit juices rose from 8.7 million cases in 1935 to 42.3 million cases in 1941. 4/

The war has given great impetus to the production of dehydrated vegetables and quick-frozen fruits and vegetables. Quick-frozen fruits and vegetables have increased from 213 million pounds in 1939 to 309 million pounds in 1941, 5/ with 400 million pounds estimated for 1942. 6/ The production of dehydrated vegetables has risen from 5.6 million pounds in 1939 to an anticipated 100 million pounds for 1943. The increase in these products is due primarily to demands by the Government for shipment abroad.

Production of preserves, jams, and jellies was also stimulated by government buying, but the rise in consumption had started earlier. From 1925 to 1936 the output varied between 6.3 and 7.9 million cases per year. By 1939 the output was 9.5 million cases, and in 1941 production reached the all-time high of 11.3 million cases. 7/

1/ Address by Roy F. Hendrickson, U. S. Department of Agriculture, at Food Processing Industries Conference, Chicago, December, 1942.

2/ Western Canner and Packer Yearbook, 1940, page 60, and 1942, page 95.

3/ National Canners Association statistics.

4/ Western Canner and Packer Yearbook, 1942, p. 143.

5/ Ibid., p. 225.

6/ Address by Roy F. Hendrickson, ibid.

7/ Western Canner and Packer Yearbook, 1942, page 219.

The production of salad dressings has increased in almost every year since 1928, when the output was 17 million gallons. In 1941, the production was 44 million gallons, the highest ever reached in this branch of the industry. 1/

Pickle production also has increased in the last few years. Packers regularly moved between 4 and 5 million bushels per year from 1929 to 1938, but in 1941 the movement reached over 6 million bushels, the largest ever recorded. 2/

The production of the flavoring extracts and syrups branch increased from $106.1 millions in 1929 to $147.6 millions in 1939. The production of vinegar and cider, the only major product to show a decline, dropped from approximately $17 millions in the 1920's to $12.9 millions in 1939. Trade sources indicate that output has been increasing since 1939, although no exact figures are available. 3/

The Present Demand for Canned and Preserved Foods.

The fact that rationing of canned, dried, and frozen fruits and vegetables, including juices and soups, has been found necessary is perhaps the best indication of the present market for those products. Trade papers during the last few months, in reporting conditions, repeatedly state that the market is depleted of stocks. Typical of market news is: "There is certainly no difficulty in selling any goods available at present. The principal difficulty is to allocate offerings so as to take care of established trade and see that everybody has a little." 4/

Two major factors have brought about this condition, namely, increased income of consumers and demands by the armed forces. It has been estimated that the increase in sales of canned and preserved foods which can be expected with a 20 percent consumer income ranges from 15 to 20 percent. 5/ This means, simply, that the increase in consumers' income from November, 1941 to November, 1942 of approximately 28 percent would be expected to cause an increase in demand of approximately 24 percent for November, 1942 over November, 1941. 6/ This corresponds closely with the actual change in sales of retail food stores, which increased from $12.4 billions in 1941 to $15.2 billions in 1942, or approximately 23 percent. 7/

In 1942 the government took approximately one-third of the canned fruits and vegetables production, and in 1943 the government expects to take 50 percent.

1/ Western Canner and Packer Yearbook, 1942, page 70.

2/ Data from U. S. Bureau of Agricultural Economics.

3/ Western Canner and Packer Yearbook, 1942, page 220.

4/ The Canner, "News of the Markets," December 29, 1942, page 19.

5/ The Structure of the American Economy, Part 1, National Resources Committee, page 19.

6/ Total United States income November 1942, $10,394 millions; November, 1941, $8,111 millions.

7/ U. S. Department of Commerce, Survey of Current Business, January 1943 and February 1943.

This leaves 80 to 85 million cases of canned vegetables available for civilians in 1943, or 18 to 19 pounds per capita. This compares to consumption of over 25 pounds per capita in 1941. From 30 to 36 million cases of canned fruits will be available for civilians, or 10 to 12 pounds per capita as compared to over 19 pounds per capita consumed in 1941. 1/

Government representatives indicated that the Army expects to purchase about 360 million pounds of preserves, jams, jellies, and fruit butters in 1943. At the same time, most packers reported increased sales aside from government contracts. 2/

Dehydrated fruits and vegetables requirements for the government are estimated at about 333 million pounds for 1943. An additional 67 million pounds, chiefly of soups, is to be allocated to civilian use. This will require a great increase in production, as only 100 million pounds were estimated as produced in 1942. Approximately 71 million pounds of frozen vegetables - about 70 percent of the 1941 production - are estimated as required for the armed forces in 1943. Pickled fruits and vegetables are purchased extensively by the Army, as pickles and relishes are definitely a part of the soldiers' diet. The volume of production in the flavoring extracts and syrups branch has risen steadily through the war period, despite restrictions on raw materials, and industry representatives expect 1943 to exceed previous years.

Consumer Rationing.

On March 1, 1943, Ration Order 13 instituted consumer rationing of canned, dried, and frozen fruits and vegetables. Point values were assigned each product, and consumers were limited to a specified number of points per month. Included in the rationed foods are all canned fruits, fruit juices, vegetables, vegetable juices, soups, and baby foods; all frozen fruits and vegetables; all dried and dehydrated fruits and soups; and all dried beans, lentils, and peas.

Among the processed foods not included in the rationing order are jams, jellies, and preserves; pickles and relishes; canned spaghetti, macaroni, fruit puddings, chili con carne, and meat stews; olives; mincemeat; maraschino cherries; fruit and vegetable juices in containers over one gallon; and frozen fruits and vegetables in containers over ten pounds.

Price Controls

Many products of the industry such as pickled products, salad dressings, vinegar, and flavoring extracts are regulated by the General Maximum Price Regulation which froze prices as of March 1942. The bulk of the production, however, is governed by special price regulations. Following is a summary of the pricing formulas in the more important regulations.

Canned vegetables. Price Regulation 152, Effective May 25, 1942.

The weighted average price charged by the canner f.o.b. factory during

1/ The Canning Trade, January 11, 1943, page 7.

2/ Western Canner and Packer Yearbook, 1942, page 219.

the first 60 days after the beginning of the 1941 pack, plus 8 percent of this price, plus the actual increase in the cost of the raw agricultural commodity as of May 4, 1942 over the cost for the 1941 pack.

This increase was designed, according to the Office of Price Administration, to take care of a 25 percent increase in labor cost, a 9 percent increase in the cost of cans and containers, a 20 percent increase in the cost of sugar, salt and condiments, and a 15 percent increase in other manufacturing costs. 1/

Canned fruits and berries. Price Regulation No. 185, Effective July 29, 1942.

The weighted average price charged by the canner f.o.b. factory during the first 60 days after the beginning of the 1941 pack, plus 10 percent of this price, plus the actual increase in the cost of the raw agricultural commodity for the 1942 pack over the cost for the 1941 pack.

This increase was designed, according to the Office of Price Administration, to take care of a 25 percent increase in labor cost, a 12 percent increase in the cost of sugar, and a 13 percent increase in other manufacturing costs. 2/

Fruit preserves, jams and jellies. Price Regulation No. 226, Effective September 26, 1942, as amended to February 12, 1943.

The weighted average price f.o.b. factory for each kind during the 1941 base period, plus 1.4 cents per pound of finished product, plus the difference between the average costs of 1941 fruit and 1942 fruit, with certain specified qualifications, plus difference between the average costs of cold packing fresh fruit in 1941 and in 1942.

This increase was designed, according to the Office of Price Administration, to reflect the increase in cost of raw materials other than fruit, supplies, direct labor, and factory overhead in 1942 and 1941. 3/

Frozen fruits, berries, and vegetables. Price Regulation No. 207, Effective August 24, 1942.

The weighted average price f.o.b. factory during the first 60 days after the beginning of the 1941 pack, revised to reflect no more than seven months storage charges for quick-frozen products and 30 days storage for cold packed products, plus 12 percent of the revised price, plus the actual increase in the cost of the agricultural raw commodity in 1942 over the cost for the 1941 pack, subject in every case to specified ceiling prices for the agricultural commodities.

This increase was designed, according to the Office of Price Administration, to take care of a 20 percent increase in storage costs, a 25 percent increase in labor costs, a 15 percent increase in packing materials, a 12 percent

1/ OPA Press Release PM-3439, May 27, 1942.

2/ Statement of Considerations for Regulation, Pike and Fisher, OPA Service, paragraph 41: 473.

3/ Statement of Considerations for Regulation, Pike and Fisher, OPA Service, paragraph 41: 821.

increase in the cost of sugar, and a 15 percent increase in other manufacturing costs. 1/

Dried fruits. Price Regulations No. 227 and 242, Effective September 22, 1942 and October 14, 1942.

Specific prices are set for apricots, figs, peaches, pears, prunes, and raisins.

These prices were designed, according to the Office of Price Administration, to reflect the increase in various items of costs in 1942 over 1941, including an increase of approximately 30 percent in labor cost. 2/

Specific food products (including, among others, canned citrus fruits, juices and other products). Price Regulation No. 280, Effective December 3, 1942.

Highest price charged between September 28 and October 2, 1942.

Seasonal and miscellaneous food commodities. Price Regulation No. 262, Effective November 14, 1942.

Includes, among others, fountain fruits, mincemeat, fruit puddings, baker's pie fillings, chili con carne. Maximum costs as of March 1942 multiplied by 1941 mark-up.

Limitations on Production

The most important limitations placed on the production of canned and preserved fruits and vegetables relate to restrictions on the use of cans and sugar, and to reservations of various products for government use. The following are the more important conservation orders and their salient points.

Cans. Conservation Order M81 Amended December 9, 1942.

No limitation is placed on the use of cans for the canning of corn; peas; tomatoes; green, wax, and fresh shelled beans; green asparagus; tomato pulp, paste, sauce and juice; grapefruit juice; pineapple juice; pineapples; pears, peaches (freestone prohibited in California); fruit cocktail; and seasonal soups.

A limitation of 25 percent of the 1942 pack is placed on the canning for civilian use of ripe olives, 50 percent on the canning of fresh prunes (except California), 75 percent on the canning of non-seasonal soups, 80 percent on the canning of spinach and various greens, and 100 percent on the canning of cherries, plums, baby foods, grape juice and pulp, citrus pulp, and various berries.

All other products may be canned for government war purposes only, either in an unlimited amount on direct government contract, or, where there is no prior contract, in an amount limited by the quota established in conservation order M86e.

1/ Statement of Considerations for Regulation, Pike and Fisher, OPA Service, paragraph 41: 722.

2/ Id. paragraph 41: 853 et seq.

Reservations for the government. Food Distribution Order 22, Effective February 19, 1943 (previously Conservation Order M86).

The percentage of the 1942 pack which must be set aside for 1943 government delivery, and can sizes, grades and styles to be packed, are prescribed. The percentages are as follows:

Apples	63	Orange juice (other		Corn	40
Applesauce	41	States)	21	Peas	48
Apricots	60	Orange and grape-		Pumpkin or Squash	51
Berries	50	fruit juice blended	100	Spinach	48
Blueberries	100	Peaches	55	Tomatoes	40
Cherries RSP	70	Pears	60	Tomato catsup	61
Cherries, Sweet	65	Pineapple	70	Tomato juice	43
Figs	100	Pineapple juice	37	Tomato puree	71
Fruit cocktail	64	Asparagus	43	Tomato paste	40
Grapefruit	19	Beans, lima	37		
Grapefruit juice	58	Beans, snap	38		
Orange juice		Beets	100		
(Fla.)	45	Carrots	130		

Closures for glass containers. Conservation Order M104, Effective January 1, 1943.

Tinplate, terneplate, blackplate, or rubber closures for glass containers may be used only to the following extent for the following products. Many items are limited as to use of rubber, and as to the composition and concentration of the product.

Unlimited quota: green asparagus; green, wax, lima, green soybeans, and fresh shelled beans; corn; peas; tomatoes; vegetable juices; fruit cocktail; peaches (no freestone in California); pears; dry fruit concentrates; seasonal soups; honey; and dehydrated vegetables.

In the same amount as packed in glass in 1942: tomato pulp, apricots, figs, jams, jellies, preserves, fruit butters, pickles, relishes, mustard, green olives (1941 base), horseradish, sauces, French dressing, maraschino cherries, extracts, vinegar, dehydrated soup, and mincemeat.

In the specified proportion of the quantity packed in glass in 1942: beets 200 percent; carrots 150 percent; spinach and other greens 300 percent; tomato catsup and chili sauce 150 percent of closures with rubber, 200 percent of closures without rubber; various berries 225 percent; cherries 200 percent; plums 150 percent; fresh prunes 200 percent; mayonnaise, Russian and Thousand Island dressings 125 percent; sandwich spread other than meat, 125 percent; baby foods 125 percent.

In the specified proportion of the amount packed in both glass and tin in 1942: dry beans 25 percent; tomato paste 50 percent; tomato sauce 100 percent; applies and applesauce 10 percent; olives 75 percent; crushed fruits 100 percent; fruit juices 100 percent; liquid fruit concentrates 100 percent; nectars 100 percent; pectin 100 percent; chili con carne 25 percent; corned beef hash 100 percent (of 1941); clam broth 100 percent; non-seasonal soups 75 percent.

Sugar. Ration Order No. 3. Effective April 20, 1942.

There is no restriction on the amount of sugar which may be used for

canning fruits, vegetables, juices, and frozen fruit, except that the quantity of sugar used per unit of canned fruits and fruit juices must be limited to 90 percent of the amount used per unit in 1941, while amounts of sugar per unit are prescribed for canned vegetables and frozen fruit.

A monthly allotment is given the following products, the allotment being 70 percent of the amount used in the corresponding month of 1941: preserves, jams, jellies and fruit butters; flavoring extracts and syrups; pickles, catsup, tomato sauces and chili sauce; salad dressings; mince meat, soups, and puddings.

The amount of sugar in products delivered to the Government for war uses need not be counted in these percentages. Provision is made for increased supplies where necessary to conserve perishable fresh fruits and vegetables.

Increases in allotments for the period July 1 to October 31 gave these industries an additional 10 percent during the 1942 season. An increase in allotment was also made to industrial users in certain specified counties, in quantities proportionate to increases in population.

Fats and oils. Preference order M71. Effective September 22, 1942.

Manufacturers of salad dressings and mayonnaise must confine their use of oils to 88 percent of the average total amount used in 1940 and 1941, computed quarterly.

Price Supports

Price supports to growers of tomatoes, peas, corn, and snap beans were announced on January 28, 1943 as the first step in the Department of Agriculture's program to assist farmers in producing sufficient quantities to keep canning and dehydrating plants operating at full capacity. Under this program the Commodity Credit Corporation will purchase the output of certified processors at prices high enough to permit the canners to pay the grower specified minimum prices substantially above those prevailing last season. The government will then sell back a portion of the pack for civilian consumption to such canners at a discount, in order that the higher prices will not be passed on to the consumer. It is expected that the new OPA ceilings on canned foods, which will consist of specific dollars and cents maximum prices at the packer level, will approximate the levels obtained by existing regulations for the 1942 pack. 1/

Trend of Profits

Published financial data for 14 firms, shown in Table 19, indicate that sales and earnings have increased in almost every case during the past few years. The increase in sales for 1941 over 1940 ranged from 3 percent to 29 percent, while the 1941-1942 increase ranged from 15 percent to 95 percent. In each year only one firm showed a decline in sales.

Net income showed increases ranging from 8 percent to 192 percent for 1941 over 1940, and from 20 percent to 458 percent for 1942 over 1941. The average increases were 47 percent and 29 percent respectively. Three firms indicated declines in net income for the first period, but only one, the Hawaiian Pineapple

1/ OPA Release 1585, January 28, 1943.

(12,317)

Table 19. Canned fruits and vegetables and related products industry: Sales, earnings, and financial ratios for selected firms, 1940, 1941, 1942

	Fiscal year ending a/	Sales 1942	Sales 1941	Sales 1940	Percent change in sales 1941-1942	Percent change in sales 1940-1941	Percent net income to sales 1942	Percent net income to sales 1941	Percent net income to sales 1940	Percent net income to net worth 1942	Percent net income to net worth 1941	Percent net income to net worth 1940
California Conserving Company	6/30	5,310,436	3,778,732	2,921,871	+ 41	+ 29	4.09	4.37	3.92	14.3	12.7	10.3
California Packing Company	2/28	90,867,790	61,973,036	59,441,929	+ 30	+ 4	3.90	4.24	5.13	6.5	5.6	6.7
Columbus Foods Corporation	4/30	1,725,642	1,330,792	1,064,108	+ 30	+ 25	7.59	7.72	3.30	17.6	13.3	4.6
Harbauer Company	6/30	1,251,994	1,086,004	909,259	+ 15	+ 19	4.94	4.19	—	7.6	6.0	—
Hawaiian Pineapple Company, Ltd.	5/31	26,407,313	27,586,651	25,901,550	- 4	+ 7	10.20	12.62	12.40	11.3	14.8	14.5
Hunt Brothers Packing Company	2/28	8,700,056	5,353,137	4,491,627	+ 63	+ 19	4.84	1.41	0.94	14.8	3.0	1.7
Kuner-Empson Company	3/31	2,942,768	2,081,953	2,025,452	+ 41	+ 3	3.04	3.33	2.28	7.4	6.7	2.3
Libby, McNeill & Libby	2/29	104,574,572	58,971,538	73,080,185	+ 77	-19	3.23	4.51	5.18	9.3	7.8	11.3
Louden Packing Company	6/30	5,731,031	3,436,929	—	+ 67	—	3.57	3.82	—	11.8	8.6	4.1
Minnesota Valley Canning Company	3/31	—	—	—	—	—	—	—	—	19.6	17.8	16.6
Phillips Packing Company	3/31	12,628,340	—	8,514,663	—	—	8.84	—	—	18.4	—	—
Snider Packing Company	3/31	8,989,891	6,538,480	6,358,020	+ 37	+ 3	5.00	5.55	7.81	9.6	8.0	12.1
Stokely Brothers & Company	5/31	42,113,686	21,610,234	20,733,988	+ 95	+ 4	4.06	3.31	1.59	21.2	11.2	5.8
Welch Grape Juice Company	8/31	—	—	—	—	—	—	—	—	15.9	13.6	9.2
Median					+ 41	+ 4	4.46	4.24	3.92	13.0	8.6	7.9

Source: Moody's Industrials, Standard & Poor's

a/ The fiscal year ends after seasonal operations are completed, hence 1942 data refer to the 1941 season, 1941 data to the 1940 season, etc.

(12,317)

Table 19. Canned fruits and vegetables and related products industry: Sales, earnings, and financial ratios for selected firms, 1940, 1941, 1942. (continued)

	Net income (after taxes)			Percent change in net income		Dollars earned per share of common stock a/			Percent change in dollars earned per share of common stock	
	1942	1941	1940	1941-1942	1940-1941	1942	1941	1940	1941-1942	1940-1941
California Conserving Company	217,349	165,236	114,420	+ 32	+ 44	4.41	3.34	2.29	+ 32	+ 46
California Packing Company	3,156,074	2,624,699	3,047,549	+ 20	- 14	3.11	2.56	3.00	+ 21	- 15
Columbus Foods Corporation	131,071	102,765	35,150	+ 28	+ 192	4.86	3.11	0.25	+ 56	+1144
Harbauer Company	61,827	45,545	d/ 8,979	+ 36	—	1.37	1.01	d/ 0.20	+ 36	—
Hawaiian Pineapple Company, Ltd.	2,692,319	3,482,893	3,199,224	- 23	+ 9	2.02	2.61	2.40	- 23	+ 9
Hunt Brothers Packing Company	421,294	75,447	42,057	+ 458	+ 79	2.45	0.15	d/ 0.06	+1533	
Kuner-Empson Company	89,586	69,268	46,267	+ 29	+ 50	0.55	0.41	0.24	+ 34	+ 71
Libby, McNeill & Libby	3,375,286	2,660,847	3,782,237	+ 27	- 30	0.93	0.73	1.04	+ 27	- 30
Louden Packing Company	204,437	131,319	57,010	+ 56	+ 130	0.57	0.36	0.16	+ 58	+ 125
Minnesota Valley Canning Co.	1,116,042	855,822	791,826	+ 30	+ 8	15.40	11.62	9.95	+ 33	+ 17
Phillips Packing Company	1,116,690	—	11,779	—	—	2.26	—	d/ 0.07	—	—
Snider Packing Company	449,237	362,940	496,674	+ 24	- 27	2.14	1.73	2.37	+ 24	- 27
Stokely Brothers & Company	1,711,232	715,589	329,642	+139	+117	2.53	0.85	0.15	+198	+467
Welch Grape Juice Company	465,888	369,838	241,342	+ 26	+ 53	2.76	2.11	1.32	+ 31	+ 60
Median				+ 29	+ 47				+ 33	+ 46

Source: Moody's Industrials, Standard & Poor's

a/ No change in number of shares, except for Stokely Brothers & Company, which had 552,500 shares in 1941; 591,176 shares in 1942.

d/ Denotes deficit.

Company, showed a decline for 1942 over 1941.

While these figures apply to the larger firms only, it is common knowledge in the trade that sales and earnings have been good for the last few years. As one trade paper editor put it, "Never before in all my experience as a canner—and that goes back to the last century, remember—has such a market at profitable prices for every can I produced faced me!" 1/ And again, "Today you know as surely as it is humanly possible to know, that you can sell every worth while can you can possibly produce, promptly and at a profit, and not just of the 1943 packs, but in all probability of 1944 and '45 packs." 2/

The current situation in the industry indicates that the amounts allowed by the OPA to cover increased costs have been adequate. These amounts, we have seen in the case of canned vegetables, were designed to take care of a 25 percent increase in labor cost, a 9 percent increase in the cost of cans and containers, a 20 percent increase in the cost of sugar, salt and condiments, and a 15 percent increase in other manufacturing expenses. 3/

Figures published by Dun and Bradstreet for 29 firms, showing only median percentages, indicate the same trends as shown in Table 19, although the percentages are numerically different. Whereas the median of net income to sales in Table 19 is 4.46 percent for 1942, 4/ the Dun and Bradstreet percent of net profit to sales is 3.89. Similarly, where the median of net income to net worth in Table 19 is 13 percent, the Dun and Bradstreet figure is 17.06 percent. The Dun and Bradstreet table showing the trend since 1937 follows:

Percentages of profits for fruit and vegetable canners, 1937 to 1941

Year	Number of concerns	Percent net profits on net sales	Percent net profits on tangible net worth
1937	42	2.72	6.29
1938	46	0.47 *	1.01 *
1939	42	2.03	4.80
1940	34	2.24	6.31
1941	29	3.89	17.06

Source: Our Critical Wealth in Inventories, Roy A. Foulke, Dun and Bradstreet, Inc.

* Loss

1/ The Canning Trade, January 25, 1943.

2/ The Canning Trade, (Editorial), January 11, 1943.

3/ OPA Press Release PM-3439, May 27, 1942.

4/ The 1942 data refer to 1941 canning season operations, hence are comparable to the Dun and Bradstreet 1941 data.

Table 20. Index numbers of retail prices of canned and dried fruits and vegetables, United States, specified periods (1935-39 = 100)

Year and month	Fruits and vegetables	
	Canned 1/	Dried
1940	92	101
1941	98	107
1940		
Oct.	92	99
Nov.	91	100
Dec.	91	100
1941		
Jan.	91	100
Feb.	92	100
Mar.	92	99
Apr.	93	100
May	94	103
June	96	105
July	98	106
Aug.	100	109
Sept.	102	111
Oct.	104	113
Nov.	105	116
Dec.	106	118
1942		
Jan.	109	122
Feb.	115	125
Mar.	121	128
Apr.	122	131
May	123	131
June	122	133
July	122	134
Aug.	123	139
Sept.	124	143
Oct.	125	150
Nov.	127	150
Dec. 2/	128	150

Source: Index numbers from Bureau of Labor Statistics and rounded to the nearest whole number by Bureau of Agricultural Economics.

1/ Canned weight
2/ Preliminary

Trends of Hourly Earnings and Hours Worked Per Week

Average hourly earnings in the canning and preserving branches of the industry, the only branches for which data are available, 1/ have increased steadily for the last five years. Monthly averages during 1938 ranged from 42.3 cents to 50.5 cents, with the average for the year 45.4 cents, while in 1941 the monthly averages ranged from 50.4 cents to 56.8 cents. In 1942 the earnings were definitely higher, ranging from 58.3 cents in January to 68.5 cents in November.

This upward trend of hourly earnings has been accompanied by a similar upward trend in employment. As table 23 indicates, the number employed has generally increased since 1939. In the most important canning month, namely September, employment has shown an increase from an index of 201 in 1939 to 239 in 1942.

Only a slight upward trend is apparent in the average number of hours worked per week during the last five years. In 1938 the monthly average of hours worked per week ranged from 33.5 to 38.2, while the average for the year was 36. During 1941, the monthly averages ranged from 33.0 to 42.2 hours, and in 1942 from 35.5 to 41.1 hours. These figures fail to disclose the wide variation in hours worked by individual employees within each month, and indicate the danger involved when the figures are used for purposes other than showing trends. The Women's Bureau 2/ found that in an active week of the 1939 pea canning season, 38.5 percent of the employees worked less than 40 hours per week, yet 35.1 percent worked 60 hours or over, and 14.3 percent of the employees worked 80 hours or over. In the same study it was found that 36.4 percent of the employees in tomato canneries worked fewer than 40 hours per week, while 24.1 percent worked 60 hours or over. In corn canning plants, 38.2 percent worked less than 40 hours per week, 31.5 percent 60 hours or over, and 11.4 percent worked 80 hours or over.

It is interesting to observe, as table 21 shows, that the average hours worked stayed steadily between 53.3 and 54 hours per week from 1923 to 1929, then dropped to a low of 33.1 in 1934. During the period 1923 to 1929, the index of output per man-hour ranged from 96.5 to 109.4, the high point being reached in 1928. From 1930 to 1936 it is interesting to observe output per man-hour increased considerably, ranging from 110.3 to 146.8, the high point being 1935.

1/ Canning and preserving figures include data for fish canneries. Hence these figures should be understood as indicating trends only and not as showing wage rates.

2/ Application of Labor Legislation to the Fruit and Vegetable Canning and Preserving Industries, Women's Bureau, U. S. Department of Labor, Bulletin No. 176, pp. 82-84.

Table 21. Canned fruits and vegetables and related products industry: Index of output and hours worked per week, canned and preserved fruits and vegetables plants, 1923-36. (1929=100)

Year	Average Hours Worked Per Week	Output per man-hour
1923	54.0	96.5
4	53.9	107.1
5	53.8	101.1
6	53.7	110.4
7	53.5	100.1
8	53.4	109.4
9	53.3	100.0
1930	49.3	110.3
1	45.2	126.6
2	41.2	128.0
3	38.3	144.9
4	33.1	135.9
5	36.1	146.8
6	36.7	140.5

Source: Production, Employment, and Productivity in 59 Manufacturing Industries, National Research Project, WPA, 1939.

Sources of Labor

Canning and preserving plants require large numbers of workers for relatively short periods of time, hence year-round employment can be given to only a small portion of the laboring force. Plants which limit themselves to canning seasonal products maintain only skeleton crews during the inactive season. These employees are used for reconditioning machinery, warehousing and labeling, and general maintenance work. Non-seasonal plants offer more steady employment, but even these plants typically have peaks during which seasonal products expand the scale of operations.

The Women's Bureau survey 1/ found that in 1937, a good canning year, the longest canning period reported was 8 weeks for corn or peas, 13 weeks for tomatoes and tomato products, 28 weeks for three or more seasonal vegetables, and 52 weeks for seasonal and non-seasonal products of all kinds. In seasonal and non-seasonal vegetable plants operating 52 weeks in Maryland and Wisconsin, it was found that in only 6 weeks and 9 weeks respectively did the employment exceed two-thirds of the peak week employment. Even among the non-seasonal vegetable products plants, the number of weeks in which employment exceeded two-thirds of peak week employment ranged from 5 in Indiana to 38 in Illinois.

Workers needed for these seasonal peaks are obtained, the Women's Bureau

1/ Women's Bureau, op. cit., p. 50.

(12,317)

Table 22. Canning and preserving: Average weekly earnings, average weekly hours, and average hourly earnings, January 1938 to November 1942. 1/

Year	Average for year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Average weekly earnings (dollars)													
1938	15.86	16.11	16.30	16.32	16.53	17.05	15.98	16.06	14.67	15.76	16.07	15.14	16.55
1939	16.77	16.47	17.75	17.13	16.13	17.01	15.54	15.49	17.24	17.32	16.97	16.53	17.37
1940	16.61	17.41	16.69	16.88	15.64	17.37	16.05	15.73	18.02	16.40	16.23	15.74	17.10
1941		16.67	17.02	17.90	17.33	17.44	18.75	19.32	20.27	21.21	21.23	20.27	19.79
1942		20.65	21.96	21.35	21.32	21.56	22.19	24.13	25.14	24.88	24.93 2/	25.18 2/	
Average weekly hours													
1938	36.0	34.5	34.4	34.5	34.6	34.5	34.9	38.2	35.1	38.3	37.3	33.5	35.4
1939	36.9	34.7	35.6	35.5	34.0	34.9	34.2	34.6	39.5	41.0	38.3	34.5	35.6
1940	36.3	35.3	34.6	34.8	31.6	34.9	34.3	36.3	39.6	38.5	37.4	33.4	34.4
1941		33.0	33.9	34.5	34.2	34.3	36.6	39.2	39.8	42.2	39.8	36.4	36.1
1942		36.5	38.0	36.6	35.8	35.5	37.6	40.6	38.2	41.1	37.62/	37.52/	
Average hourly earnings (cents)													
1938	45.4	48.0	48.8	48.9	49.4	50.5	46.7	42.9	42.9	42.3	41.9	47.0	46.1
1939	46.4	48.6	51.5	49.4	48.9	50.0	46.4	44.5	44.7	43.2	45.6	49.0	50.6
1940	46.5	50.2	49.5	49.5	50.5	50.7	47.0	43.6	46.4	43.5	44.2	47.8	51.0
1941		51.0	50.7	52.5	51.4	51.7	51.9	50.4	52.0	51.1	54.7	56.8	56.1
1942		58.3	58.7	59.5	61.3	61.7	59.9	60.1	61.1	62.2	67.72/	68.52/	

Source: Bureau of Labor Statistics

1/ Includes canned and cured fish as well as canned and dried fruits and vegetables, preserves, jams, and jellies, pickled fruits and vegetables, salad dressings, and quick frozen fruits and vegetables

2/ Preliminary

(12,317)

Table 23. Canning and preserving: 1/ Index numbers of employment and weekly wages of wage earners, January 1939 to December 1942.

(1939 = 100)

Year	Average for year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
						Employment							
1939	100.0	59.6	55.1	60.2	71.1	71.2	93.1	130.1	190.8	201.0	120.6	80.3	67.2
1940	96.9	60.3	60.6	58.4	68.5	66.3	97.1	118.6	174.6	178.1	133.5	81.8	68.5
1941	106.8	60.1	56.3	53.2	64.2	66.2	90.0	139.7	201.7	215.8	144.8	107.8	82.3
1942		74.1	73.9	64.4	68.6	70.6	89.1	142.3	184.5	239.7	146.4	103.9	85.6
						Weekly Wages							
1939	100.0	58.6	58.5	61.9	67.9	72.0	86.0	120.1	196.4	207.0	122.2	79.3	70.0
1940	98.9	63.2	61.1	59.8	65.2	70.1	91.5	114.3	194.6	181.7	133.5	79.0	72.5
1941	130.4	62.1	59.9	59.3	68.6	71.4	101.7	169.6	234.6	284.7	192.3	133.4	102.0
1942		95.6	101.0	85.6	91.8	94.7	123.5	213.7	266.2	373.4	228.7	163.9	137.9

Source: Bureau of Labor Statistics

1/ Includes canned and cured fish as well as canned and dried fruits and vegetables, preserves, jams, and jellies, pickled fruits and vegetables, salad dressings, and quick frozen fruits and vegetables

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found, primarily from the immediate vicinity of the plant. These local people commonly are members of farm families, agricultural wage earners, local casual labor in nearby towns, housewives, students, and industrial labor not busy in summer. Migrants were employed to a limited extent in Maryland, California and Florida, but were seldom used in the middle west or New York.

Scarcity of Labor

Because of heightened industrial activity caused by the war, the canning industry expects difficulty in recruiting its labor force for the 1943 season. During the 1942 season considerable difficulty was reported in finding adequate help, but the industry managed to recruit a sufficient force, nevertheless, to produce the largest pack on record.

At the annual meeting of the National Canners Association held in Chicago on December 17, 1942, the gravity of the situation was expressed in a resolution as follows: "Resolved, the securing, training, and utilization of adequate manpower for the harvesting and processing of essential foods constitutes the most critical problem in meeting the goals for 1943 production." The association, in further recognition of the problem, formed a Manpower Committee on December 29, 1942 to aid the canners in meeting this difficulty.

The War Manpower Commission has announced that to alleviate the harvesting phase of this situation, it will institute a program to include, among other things, (1) continuous full-time employment of mobile groups of experienced farm workers to be transported at government expense from one area to another as crops mature, and (2) expansion of the U. S. Employment Service farm placement machinery. 1/ Present plans call for tapping the following sources of local labor: school youths, industrial workers who may be available out-of-working hours and during vacations and holidays, agricultural workers who can be rotated in crews between employers, housewives and other unemployed, and employed townspeople and business people for part-time employment during an emergency.

Since farm laborers constitute part of the working force available for canning plants, the trend of farm labor rates offers an indication of the probable trend of canning wage rates for 1943. The day rate without board for farm laborers, for example, increased from January 1, 1942 to January 1, 1943 by 33 percent for the United States as a whole. 2/ Even for the period October 1, 1942 to January 1, 1943, when a seasonal decline in the general level of farm rates was to be expected, there was an increase of almost 3 percent for the country as a whole; while some areas showed the usual seasonal decline, the South Atlantic states gained 10 percent and the West South Central states, 6 percent.

The influence of farm labor rates on canning labor rates for the 1943 season has already been a cause of concern to many in the industry. The Michigan Canners' Association, for example, petitioned the War Labor Board at its February 1943 convention to take steps to raise wages in the canning industry. It noted "the sharp advance in wages of farm labor within the State, which in many sections

1/ Canning Trade, December 7, 1942.

2/ United States Department of Agriculture, Farm Labor Report, January 15, 1943.

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already has advanced far above the level at which wages in the canning factories of the State have been frozen." 1/

An illustration of the rise already taking place in cannery wage rates is furnished by Florida, a state well along in its 1943 citrus canning season. At the request of the Florida Canners Association, the War Labor Board approved a wage increase of 25 percent, retroactive to the start of the 1942-43 season. This wage rate affected between 9,000 and 10,000 workers whose prevailing wage rate last year was reported as 37.6 cents per hour. 2/

Effect of Wage and Hour law on production

There appear to be no adverse effects on either production or consumption of canned and preserved fruits and vegetables as a result of the 25 cent minimum which was established in October 1938 or of the 30 cent minimum established in October 1939. Production in almost every branch of the industry has increased since the wage and hour law became effective.

The establishment of the 25 cent minimum, which first affected the 1939 canning season, decreased the percentage of employees earning less than 25 cents per hour from 18.6 percent of the total to 5.4 percent in the plants studied by the Women's Bureau in its survey of identical fresh vegetable canneries in 1938 and 1939. (Table 24) Tomato cannery workers earning less than 25 cents decreased from 20.9 percent of the total to 7.8 percent. No data are available to show the proportion affected by the 30 cent minimum which applied to vegetable canneries for the 1940 season, but certainly the effect was at least as large as that of the 25 cent minimum. Despite the increases in minimum rates, the production of tomatoes increased, as table 25 shows, from 23.1 million cases in 1938, before the 25 cent minimum became effective, to 24.5 million cases in 1939. In 1940, when the 30 cent minimum was established, 29.5 million cases were produced, and in 1941 the pack was 31.7 million cases.

Individual tomato canning states show the same relationship of production to minimum rates. While the percentage of employees earning less than 25 cents per hour in Maryland decreased from 51 percent in 1938 to 29 percent in 1939, production increased from 5.1 million cases in 1938 to 5.8 millions in 1939. In 1940, when the 30 cent minimum became effective, production remained at 5.8 million cases, and in 1941 the output rose to 6.7 millions.

In the case of Virginia, the establishment of the 25 cent minimum had no effect on wages, according to the Women's Bureau survey, as the plants covered by the survey were all exempt from the Act by virtue of the then existent area of production definition. Production of tomatoes dropped from 1.8 million cases in 1938 to 1.6 million cases in 1939, but in 1940, when the canneries were required to pay the 30 cent minimum because the definition of the area of production was changed so as to include most canneries, production rose to 2.1 million cases.

The Arkansas-Missouri region shows no relationship between the minimum rates and production. In 1938, there were 2.8 million cases of tomatoes canned in

1/ Letter from Michigan Canners' Association to National War Labor Board, February 8, 1943.

2/ The Canner, December 26, 1942, page 9.

the area, and only 1 million cases in 1939. In 1940, the year the 30 cent minimum became mandatory for most canneries, production jumped to 3.7 million cases, and in 1941 dropped to 1.7 millions. The same lack of relationship occurred in the case of the Ozark spinach pack, production varying greatly, with 1940 being the peak year. The green bean pack for the region, however, shows an almost steady growth from 1938 onward despite changes in wage-hour minimum rates. (Tables 27 and 28.)

Table 24. Canned and dried fruits and vegetables branch: Percent of employees in 318 identical fresh vegetable canneries earning less than 25 cents an hour, by state and product, in one active week of 1938 and 1939 seasons

	1938	1939
United States	18.6	5.4
Illinois	7.3	0.9
Indiana	13.8	4.9
Iowa	3.5	2.4
Maryland	45.4	16.4
Minnesota	1.1	0.1
New York	16.2	2.3
Virginia	96.0	86.8
Wisconsin	24.4	2.6
Corn	7.1	3.4
Peas	8.6	3.6
Tomatoes	20.9	7.8
Asparagus	71.2	0.0
Green and wax beans	48.9	5.3
Spinach	39.2	16.5
Lima beans	68.8	30.7

Source: Wage and Hour Division, Report on the Fruit and Vegetable Canning Industry under the Fair Labor Standards Act, May 1940

Table 25. Canned and dried fruits and vegetables branch:
Pack of canned tomatoes, by states, 1935 to 1941
(in thousand cases No. 2 cans)

	1935		1937		1938		1939		1940		1941	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
United States	26,985	100.0	26,235	100.0	23,131	100.0	24,465	100.0	29,533	100.0	31,759	100.0
New York	1,145	4.2	1,031	3.9	1,124	4.9	1,417	5.8	841	2.9	1,484	4.7
Maryland	6,894	25.5	5,961	22.7	5,091	22.0	5,807	23.7	5,792	19.6	6,719	21.2
Delaware	770	2.9	467	1.8	379	1.6	191	0.8	280	0.9	354	1.1
New Jersey	262	1.0	126	0.5	113	0.5	312	1.3	220	0.7	169	0.5
Pennsylvania	531	2.0	446	1.7	600	2.6	850	3.5	683	2.3	700	2.2
Virginia and West Virginia	3,144	11.7	1,937	7.4	1,838	8.0	1,628	6.7	2,065	7.0	2,022	6.4
Ohio	841	3.1	864	3.3	1,375	5.9	1,729	7.1	1,294	4.4	1,623	5.1
Indiana	3,587	13.3	3,642	13.9	3,037	13.1	3,376	13.8	3,093	10.5	4,239	13.3
Tennessee and Kentucky	1,160	4.3	961	3.7	799	3.5	302	1.2	592	2.0	444	1.4
Arkansas and Missouri	1,594	5.9	2,646	10.1	2,828	12.2	987	4.0	3,738	12.7	1,689	5.3
Colorado	362	1.3	439	1.7	247	1.1	376	1.5	285	1.0	182	0.6
Utah	725	2.7	1,124	4.3	855	3.7	1,053	4.3	1,075	3.6	1,222	3.8
California	4,112	15.2	4,256	16.2	2,847	12.3	3,965	16.2	7,357	24.9	8,781	27.7
Other States	1,839	6.9	2,314	8.8	1,998	8.6	2,471	10.1	2,219	7.5	2,132	6.7

Source: National Canners Association, Division of Statistics

(12,317)

Table 26. Canned and dried fruits and vegetables branch:
Pack of canned peas, by states, 1935 to 1941
(in thousand cases No. 2 cans)

	1935		1937		1938		1939		1940		1941	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
United States	24,699	100.0	23,467	100.0	25,459	100.0	16,074	100.0	25,195	100.0	28,724	100.0
Maine	269	1.1	263	1.1	175	0.7	156	1.0	233	0.9	168	0.6
New York	1,964	7.9	1,749	7.5	2,443	9.6	1,385	8.6	2,263	9.0	1,961	6.8
Maryland	2,496	10.1	1,896	8.1	1,741	6.8	842	5.3	1,401	5.6	1,288	4.5
Delaware and New Jersey	637	2.6	266	1.1	170	0.7	70	0.4	317	1.3	235	0.8
Pennsylvania	430	1.7	555	2.4	627	2.5	227	1.4	584	2.3	524	1.8
Ohio	432	1.7	434	1.8	298	1.2	213	1.3	449	1.8	342	1.2
Indiana	806	3.3	837	3.6	579	2.3	324	2.0	932	3.7	510	1.8
Illinois	959	3.9	1,110	4.7	1,003	3.9	1,033	6.4	1,601	6.3	1,395	4.9
Michigan	782	3.2	890	3.8	930	3.6	447	2.8	705	2.8	626	2.2
Wisconsin	7,333	29.7	7,077	30.1	9,065	35.6	4,595	28.6	8,213	32.6	10,842	37.7
Minnesota	2,329	9.4	1,518	6.5	1,619	6.4	1,363	8.5	2,369	9.4	2,258	7.9
Montana	263	1.1	277	1.2	142	0.5	130	0.8	211	0.8	272	0.9
Utah and Idaho	2,220	9.0	1,764	7.5	1,997	7.8	1,046	6.5	1,233	4.9	1,841	6.4
Washington and Oregon	1,982	8.0	3,494	14.9	3,469	13.6	3,203	19.9	3,165	12.6	5,370	18.7
California	415	1.7	285	1.2	244	1.0	301	1.9	144	0.6	54	0.2
Other States	1,383	5.6	1,054	4.5	959	3.3	737	4.6	1,374	5.4	1,039	3.6

Source: National Canners Association, Division of Statistics

(12,317)

Table 27. Canned and dried fruits and vegetables branch:
Pack of canned green beans, by states, 1935 to 1941
(in thousand cases No. 2 cans)

	1935		1937		1938		1939		1940		1941	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
United States	6,031	100.0	8,681	100.0	9,109	100.0	7,339	100.0	8,530	100.0	11,673	100.0
Maine and Vermont	105	1.7	162	1.9	180	2.0	108	1.5	107	1.3	164	1.4
New York	797	13.2	922	10.6	950	10.4	752	10.2	671	7.9	937	8.0
Maryland and Delaware	1,327	22.0	2,261	26.1	2,367	26.0	2,003	27.3	1,765	20.7	2,162	18.5
Pennsylvania	179	3.0	283	3.3	225	2.5	261	3.5	284	3.3	236	2.0
Indiana	363	6.0	176	2.0	173	1.9	74	1.0	27	0.3	190	1.6
Michigan	580	9.6	472	5.4	592	6.5	436	5.9	392	4.6	322	2.8
Wisconsin	519	8.6	588	6.8	803	8.8	755	10.3	795	9.3	976	8.4
Iowa and Nebraska	71	1.2	54	0.6	88	1.0	48	0.7	67	0.8	76	0.6
Tennessee and Kentucky	166	2.8	209	2.4	198	2.2	294	4.0	370	4.3	313	2.7
Arkansas and Missouri	150	2.5	198	2.3	556	6.1	279	3.8	721	8.4	1,411	12.1
Texas	71	1.2	252	2.9	167	1.8	350	4.8	206	2.4	373	3.2
Colorado	242	4.0	291	3.4	183	2.0	216	2.9	245	2.9	226	1.9
Utah	164	2.7	221	2.5	346	3.8	323	4.4	265	3.1	289	2.5
Washington	215	3.6	385	4.4	302	3.3	222	3.0	502	5.9	452	3.9
Oregon	517	8.6	1,006	111.6	1,123	12.3	717	9.8	1,510	17.7	1,905	16.3
California	253	4.2	618	7.1	360	4.0	107	1.5	202	2.4	358	3.1
Other States	310	5.1	581	6.7	497	5.4	394	5.4	401	4.7	1,281	11.0

Source: National Canners Association, Division of Statistics

(12,311)

Table 28. Canned and dried fruits and vegetables branch: Pack of canned spinach, by states, 1935 to 1941
(in thousand cases No. 2 cans)

	1935		1937		1938		1939		1940		1941	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
United States	4,318	100.0	6,122	100.0	2,892	100.0	4,055	100.0	4,980	100.0	4,946	100.0
New York	148	3.4	232	3.8	141	4.9	132	3.3	144	2.9	270	5.5
Maryland and Delaware	437	10.1	500	8.2	459	15.9	479	11.8	853	17.1	387	7.8
Missouri and Arkansas	169	3.9	1,718	23.1	554	19.1	983	24.3	1,713	34.4	1,153	23.3
Texas and Oklahoma	96	2.2	274	4.5	139	4.8	180	4.4	141	2.8	257	5.2
California	3,043	70.5	2,935	47.9	1,344	46.4	1,956	48.2	1,722	34.6	2,144	43.3
Other States	425	9.9	462	7.5	257	8.9	326	8.0	406	8.2	735	14.9

Source: National Canners Association, Division of Statistics

Table 29. Canned and dried fruits and vegetables branch: Pack of canned corn, by states, 1935 to 1941
(in thousand cases No. 2 cans)

	1935		1937		1938		1939		1940		1941	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
United States	21,471	100.0	23,541	100.0	20,470	100.0	14,567	100.0	15,524	100.0	26,109	100.0
Maine, Vermont, New Hampshire	1,931	9.0	2,054	8.7	1,901	9.3	802	5.5	794	5.1	1,404	5.4
New York	1,152	5.4	1,136	4.8	1,871	9.1	1,242	8.5	648	4.2	1,429	5.5
Maryland and Delaware	1,780	8.3	2,486	10.6	2,308	11.3	1,410	9.7	1,492	9.6	2,479	9.5
Pennsylvania	310	1.4	670	2.8	492	2.4	449	3.1	463	3.0	660	2.5
Ohio	1,461	6.8	1,184	5.0	1,212	5.9	950	6.5	688	4.4	1,568	6.0
Indiana	2,310	10.7	2,231	9.5	1,681	8.2	1,852	12.7	1,192	7.7	1,806	6.9
Illinois	4,787	22.3	4,771	20.3	2,912	14.2	2,563	17.6	2,384	15.3	4,701	18.0
Wisconsin	956	4.4	1,138	4.8	1,488	7.3	1,043	7.2	1,720	11.1	3,151	12.1
Minnesota	3,363	15.7	3,740	15.9	3,227	15.8	2,536	17.4	3,600	23.2	4,583	17.6
Iowa and Nebraska	2,785	13.0	3,054	13.0	2,229	10.9	1,096	7.5	1,629	10.5	2,800	10.7
Other States	637	3.0	1,077	4.6	1,149	5.6	623	4.3	914	5.9	1,517	5.8

Source: National Canners Association, Division of Statistics

(12,311)

Table 30. Canned and dried fruits and vegetables branch:
Pack of apples, by states, 1935 to 1941
(in thousand cases, all size containers)

	1935		1937		1938		1939		1940		1941	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
United States	2,332	100.0	2,672	100.0	1,751	100.0	2,841	100.0	2,250	100.0	4,348	100.0
New York	175	7.5	258	9.7	203	11.6	402	14.2	309	13.7	565	13.0
Maryland, Pennsylvania and Virginia	841	36.1	1,431	53.6	871	49.7	1,389	48.9	1,187	52.8	2,234	51.4
Michigan	26	1.1	30	1.1	15	0.9	a/		a/		82	1.9
Washington	858	36.8	658	24.6	457	26.1	810	28.5	514	22.8	954	21.9
Oregon	370	15.9	281	10.5	192	11.0	219	7.7	217	9.7	395	9.1
Other States	62	2.6	15	0.5	13	0.7	20	0.7	23	1.0	116	2.7

Source: National Canners Association, Division of Statistics

a/ Included in "other states."

Table 31. Canned and dried fruits and vegetables branch:
Pack of apple sauce, by states, 1935 to 1941
(in thousand cases, all size containers)

	1935		1937		1938		1939		1940		1941	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
United States	1,887	100.0	3,161	100.0	1,527	100.0	3,057	100.0	2,622	100.0	4,182	100.0
New York	1,038	55.0	1,266	40.0	834	54.6	1,635	53.5	973	37.1	1,896	45.3
Maryland, Pennsylvania and Virginia	825	43.7	1,855	58.7	682	44.7	1,409	46.1	1,634	62.3	2,175	52.0
Other States	25	1.3	40	1.3	10	0.7	13	0.4	15	0.6	111	2.7

Source: National Canners Association, Division of Statistics

TRANSPORTATION COSTS

Section 8(c) of the Fair Labor Standards Act provides that the Industry Committee may recommend reasonable classifications within the industry if it determines that such classifications are "necessary for the purpose of fixing for each classification within such industry the highest minimum wage rate (not in excess of 40 cents an hour) which

(1) will not substantially curtail employment in such classification and

(2) will not give a competitive advantage to any group in the industry * * * ."

In determining the highest minimum wage rate which will not substantially curtail employment in each such classification, the Committee (and the Administrator) are instructed by Congress to consider among other relevant factors "competitive conditions as affected by transportation, living and production costs." This section of the report deals with transportation costs in the industry and their effect on competitive conditions and employment.

It is elementary that where transportation costs are significant, every firm or producing area has an advantage in selling to customers in nearby markets. Conceivably, if production and transportation costs were equal for two plants making the same product and located 500 miles apart, each firm would be able to underbid the other in the area less than 250 miles from the plant. The only competition, if all other factors be disregarded, would be at the 250-mile point where total costs for each would be equal. The impact of a possible unequal rise of labor costs, resulting from the establishment of a minimum rate for the industry, will fall in and about the region in which competition exists.

High freight costs act as friction which limits the shipping radius for a firm, since the delivered price of a commodity is raised in distant points to such an extent that it is economical to establish new plants in the distant market to supply that market with goods. All other things being equal, the higher the freight costs, the more restricted the market. The manufacture of a product which is bulky but relatively cheap, such as common bricks, is an extreme illustration of this principle. This principle also acts to protect a firm, as high freight costs keep out distant competition. Thus we have the situation that exists in the canning of vegetables, in which the minor canning States market most of their packs within the State of production, and supply primarily the local needs, while the major canning States generally market their competitive products in a broader but still fairly limited area.

Table 32 shows freight costs per case of 24 No. 2 cans (carload basis) of fruits or vegetables from various typical shipping points to various consuming centers. 1/ It will be observed that freight costs range from 9 cents per case

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1/ Freight costs on incoming raw materials present no particular problems in the canned and dried fruits and vegetables branch, as plants generally are located near the farms supplying the produce. In the other branches, any differences in the distances from which raw materials are received may, for practical purposes, be disregarded.

Table 32. Canned and dried fruits and vegetables branch: Transportation costs between specific points of origin and destination.

Point of origin	Minimum cases 24 No. 2 cans per carload	Freight costs per case 24/2's to Chicago	New York	Detroit	Kansas City	Atlanta
San Francisco, Calif.	1538	.36	.42	.36	.36	.41
	1026					
Portland, Oregon	1538	.36	.42	.36	.36	.41
	1026					
Ogden, Utah	1538	.35	.42	.36	.31	.41
	1026					
Ft. Smith, Arkansas	1026	.25	.36	.28	.14	.27
	1538					
Madison, Wisconsin	923	.10	.22	.13	.18	.27
	1026					
Indianapolis, Indiana	923	.09	.20	.12	.17	.22
Rochester, N. Y.	923	.16	.13	.12	.28	.28
Baltimore, Maryland	923	.20	.11	.16	.27	.23
Orlando, Florida	923	.41	.29	.37	.44	.26

Source: Traffic Division, Treasury Department.

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up to as high as 44 cents, or roughly from 4-1/2 cents to 22 cents per dollar of value at present prices of approximately $1.00 per dozen. Comparing these figures with the data of Table 34, where labor costs are shown to average 13 cents per dollar of sales for the United States as a whole, it will be seen that for long distance hauls, freight costs can be more significant than labor costs. In Georgia, labor costs averaged 21 percent of the sales value of canned foods produced during the year 1939. In contrast, transportation costs alone of a shipment from Atlanta, Georgia, to San Francisco would amount to about 20 percent of the value of the shipment. In short, transportation costs of heavy articles, such as canned fruits and vegetables, are such as to retard their shipment over long distances from one region of the country to another.

The principal market for canned foods is in the area east of the Mississippi and north of the Ohio and Potomac rivers. This area has approximately 48 percent of the population, and has a shorter season for fresh vegetables and fruits than the South. It has been estimated that the average family in New York City, for example, uses at least twice the amount of canned foods in a year than does a farm family or the average family in the South. 1/ As Table 33 shows, members of white families in New England and Middle Atlantic cities annually spend approximately $4.16 per capita for canned vegetables compared to $2.55 for white families and $0.84 for negro families in the South. 2/ Canning plants in the South, because of high freight costs for canned foods, market their products other than specialties in the South, supplying the southern consumers.

Normally, the northeast area receives its canned and preserved foods from the major canning States, and normally the goods are received from as close a producing region as possible. For example, New York City usually purchases about 60 percent of its canned tomato requirements from the Tri-States (Maryland, New Jersey and Delaware), about 15 percent each from New York State and Indiana, 5 to 10 percent each from Pennsylvania and California, and small amounts from Virginia, West Virginia and Michigan. 3/ Chicago generally receives 85 to 90 percent of its canned tomatoes from the Indiana and Ohio producing region, about 6 percent from Michigan, and the remainder from the Tri-States, and from Utah, California and Illinois.

The major tomato producing states market the bulk of their production close to home, the Tri-States selling chiefly on the eastern seaboard and in the South, Virginia and West Virginia chiefly in the Southeast, Indiana and Ohio in the midwest and to some extent in the East, New York in local markets, and California on the west and east costs. In practically every instance where tomatoes normally are shipped a considerable distance the reason is clear--

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1/ New York Times, February 4, 1942.

2/ For other comparisons of amounts spent in different sections of the country for canned foods, preserves, pickles and relishes see U. S. Department of Agriculture, Consumer Purchases Study, Food Consumption and Dietary Levels, and U. S. Department of Labor, Study of Consumer Purchases, Family Expenditures in Selected Cities, 1935-36, Vol. II.

3/ Labor Standards and Competitive Market Conditions in the Canned Goods Industry, Women's Bureau, U. S. Department of Labor, Bulletin 187.

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Table 33. Estimated average per-capita consumption of and expenditure for specified items of food in a year, by region and color of family, 1934 - 36

	New England and Middle Atlantic cities (white families)		Pacific cities (white families)		East South Central cities (white families		Southern cities a/ (negro families)	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
Canned vegetables including soups	38.1	4.16	44.6	4.58	27.3	2.56	10.0	.24
Canned fruits	11.6	1.29	22.2	2.46	8.7	1.21	3.1	.31
Pickled vegetables and relishes	4.6	.77	6.1	1.02	5.0	.75	1.5	.24
Preserves, jams, jellies and butters	3.6	.60	6.9	1.02	8.4	1.57	2.6	.45

Source: U. S. Department of Agriculture, Diets of Families of Employed Wage Earners and Clerical Workers in Cities. Circular No. 507.

a/ Richmond, Virginia; Birmingham and Mobile, Alabama; Memphis, Tennessee; New Orleans, Louisiana.

either the tomatoes are of a variety not grown locally, as low-acid California tomatoes being shipped to the East, or the tomatoes are of higher grade than local products, as fancy Indiana tomatoes shipped to the eastern markets, or because the canner has developed consumer acceptance for his particular brand through advertising. The fact of differences in grades, varieties, and flavors makes the problem of ascertaining competitive conditions particularly difficult in the canned foods industry, for comparisons are difficult to make, and very often what appears to be the same product is really a different commodity so far as the market is concerned.

Under abnormal conditions, such as during the present shortage of processed foods, normal marketing areas and competitive conditions are disturbed. At the present time wholesalers are going outside their usual buying areas and are obtaining goods from points usually considered too distant for economical shipment. For example, canned Texas tomatoes and spinach are appearing in northern markets, and California tomatoes, even though sweeter than the market desires, are being brought into the New York market in larger amounts than before. This is in marked contrast to the situation in the past when only products which were produced in limited areas, such as most fruits and certain vegetables, were sold in national markets, and only such products as tomatoes, peas, spinach, green beans, etc., were in inter-regional competition. Proposals have been advanced to limit the shipping radius for canned foods to 500 miles as a war measure, but as yet no action has been taken.

Typical differences in freight rates from various producing points to a particular market can be seen in Table 32. For example, the freight cost to Detroit from Baltimore is 16 cents per case, whereas the freight from Indianapolis is 12 cents per case, and from Ft. Smith, Arkansas, 28 cents per case. All other things being equal, the Indiana canner has a freight advantage over both the Maryland and Arkansas canner in shipments to the Detroit market. In the Kansas City market, however, Arkansas has an advantage over Indiana and Maryland, for the rate from Ft. Smith to Kansas City is 14 cents per case compared to 17 cents for Indianapolis and 27 cents for Baltimore.

If all other factors were equal, Arkansas canners would have to sustain an increase in total costs of 3 cents more than the increase for Indiana canners before their advantage in the Kansas City market were eliminated. For the Maryland canners to compete in the Kansas City Market, Arkansas costs would have to rise 13 cents per case--an impossible increase if only wage costs resulting from action by the industry committee be considered. 1/

The situation in citrus juice is similar. Freight costs are 29 cents per case from Orlando, Florida, to New York City, and 42 cents to New York from California points. Costs to Florida canners would have to rise in the impossible amount of 13 cents per case before the freight advantage now enjoyed by Florida canners in the New York market is eliminated.

1/ An increase from 30 to 40 cents per hour is a 33-1/3 percent increase in labor costs. Since labor costs average 13 percent of total costs for canned foods, the increase in total costs is approximately 13 percent of 33-1/3, or roughly 4 percent. On an average price of $1.00 per dozen, this amounts to approximately 4 cents.

An examination of Table 32 clearly shows that high transportation costs for canned foods tend to give canneries in each region a decided advantage over canneries located outside that region. In view of the unprecedented demand for canned foods, there is, of course, no problem of the ability of any region of the country to absorb its output of canned goods. It is conceivable, however, that canners from Region A, for example, might undersell canners in Region B by virtue of the fact that a 40 cent minimum would mean no increase in costs for canners in Region B, but would mean a substantial increase in costs for canners in Region A. Reference to the tables showing the possible direct increase in costs as a result of a given increase in the minimum wage will indicate that the effect of such differences is limited. The greatest possible increase in labor costs where the wage rate is increased from 30 to 40 cents an hour, increases total costs only approximately 4 percent. Even when Region A has a 4 percent increase in costs while Region B has no increase in costs, Region A still has an advantage in its own region in every case where its transportation cost advantage over its distant competitors is more than 4 percent of the cost of the goods. It might, however, lose out in those markets where it was just able to compete previously if it were unable to find new economies to offset the increase in labor costs.

To summarize:

1. Freight rates relative to value of products are fairly high in the canning industry, and transportation costs for very long hauls may be higher than labor costs.

2. The marketing of specialized products such as those produced only in limited areas and nationally advertised brands, which are sold on a national scale, is not greatly restricted by transportation costs.

3. Because of the relatively high transportation costs in this industry, most of the canned foods other than the specialized products referred to above are normally marketed close to the production areas, this being particularly true in the minor canning States.

4. While canners located near the large northern consuming areas have the greatest average advantage in reaching the principal markets, the effects of a change in wage rates do not necessarily accrue to the advantage of these canners. In every case the particular market which may be affected is a primary factor to be considered.

5. Transportation costs tend to limit any region from obtaining a competitive advantage over any other region as a result of an increase in labor costs.

WAGE STRUCTURE

Scope of Survey

The information on earnings of employees in the canned fruits and vegetables and related products industry for 1942 presented in the following discussion is based on a questionnaire survey conducted by the Economics Branch of the Wage and Hour and Public Contracts Divisions. Questionnaires requesting a payroll transcription of hours and earnings of individual employees were sent to a random sample of 50 percent of the establishments in each industry branch listed in industrial and trade associations directories. Returns from 1,261 separate establishments and data for 226,904 employees were used. The tabulations were based on about 67 percent of the employment as reported by the Bureau of the Census in each state in the maximum month of 1939. On the whole the completed questionnaires gave evidence of a high level of accuracy in following the instructions, although a number of schedules required routine adjustments. Every branch of the industry was satisfactorily represented in regard to regional distribution and size of establishment.

Average Hourly Earnings

Average hourly earnings for the employees of the industry, according to the Wage and Hour Division questionnaire survey conducted in the Fall of 1942, were 48.5 cents per hour. As table 36 shows, the average was 48.5 cents per hour for the canned and dried fruits and vegetables branch, 48.3 cents per hour for the pickled fruits and vegetables branch, and 54.5 cents per hour for the preserves, jams, and jellies branch. No separate data are presented for the other branches of the industry, as the sample contained too few establishments in any one branch to provide reliable averages. The average hourly earnings for all the other branches combined was 47.7 cents per hour. Table 37 shows the distribution of average hourly earnings for the industry as a whole and for the branches.

Hourly earnings by regions are available only for the canned and dried fruits and vegetables branch. As table 38 indicates, the average earnings range from 31.4 cents per hour for Texas to 66.2 cents for Oregon. Hourly earnings in the Pacific coast states, ranging upwards of 59 cents per hour are the highest in the country; the northern and other western states have average earnings ranging from 42 cents to 52 cents per hour; and the southern states, with average earnings below 40 cents per hour, have the lowest hourly rates. Because the southern states employ so small a portion of the total number of employees in the branch, they do not greatly affect the averages for the country as a whole.

Establishments operating under union agreements reported hourly earnings higher than the general average. For the industry as a whole in continental United States, the average hourly earnings for union establishments was 54.9 cents as compared to 48.5 cents for all establishments. The average earnings for union establishments were 54.9 cents in the canned and dried fruits and vegetable branch, and 55.4 cents for all other branches.

Employees Directly Affected by Various Possible Minimum Wage Rates

Table 39 shows the percentage increases in wage bills and the number of employees who would be directly affected by an increase in minimum rates, by 1 cent intervals from 31 to 40 cents. A further analysis is made in table 36, where 35-cent and 40-cent rates per hour are used for illustrative purposes. For the industry as a whole, it will be seen that 16.2 percent of the employees would benefit from an increase in the minimum rate to 35 cents per hour. An increase to 40 cents per hour would raise the hourly rates of 29.3 percent of the employees. The number of employees affected in each state in the canned and dried fruits and vegetables branch can be seen in table 40, and the number affected in that branch according to several important products is shown in table 41.

Table 34. Canned fruits and vegetables and related products industry: Ratio of salaries and wages a/ to value of products, (in percent), by branches of the industry and by states, 1939

State	Canned and dried fruits and vegetables	Preserves, jams, jellies, and fruit butters	Pickled fruits and vegetables, and vegetable sauces and seasonings	Salad dressings	Flavoring extracts and syrups	Vinegar and cider	Quick-frozen foods
United States	13.2	12.1	14.5	8.0	6.8	16.0	18.6
Alabama	--	--	--	--	--	17.0	--
Arkansas	9.9	--	--	--	--	--	--
California	14.7	16.3	18.6	5.8	7.1	17.9	18.4
Colorado	15.9	--	16.4	--	12.7	--	--
Connecticut	--	--	--	--	--	19.6	--
Delaware	17.2	--	--	--	--	--	--
Florida	16.5	21.0	--	9.3	13.2	--	--
Georgia	20.9	--	17.4	--	--	--	--
Idaho	22.9	--	--	--	--	--	--
Illinois	10.6	13.8	10.1	--	7.0	15.8	--
Indiana	13.9	20.3	11.0	--	20.6	--	--
Iowa	17.9	--	--	--	7.4	--	--
Kentucky	16.4	17.0	16.7	--	--	--	--
Louisiana	15.4	--	14.5	--	--	--	--
Maine	14.7	--	--	--	--	--	--
Maryland	12.1	--	14.6	10.0	--	--	--
Massachusetts	--	10.1	19.8	--	15.9	17.7	--
Michigan	13.8	11.5	13.5	--	16.7	13.1	--
Minnesota	13.9	--	--	--	12.0	--	--
Mississippi	10.0	--	--	--	--	--	--
Missouri	15.8	8.6	25.3	9.9	5.7	--	--
Montana	20.9	--	--	--	--	--	--
New Jersey	--	13.0	10.9	--	--	15.6	--
New York	13.1	11.9	11.8	9.2	7.6	15.6	15.0
North Carolina	--	--	11.9	--	--	--	--
Ohio	14.1	11.2	13.1	--	14.6	--	--
Oklahoma	--	--	--	11.0	--	--	--
Oregon	14.4	13.6	28.6	18.5	15.3	27.8	--
Pennsylvania	11.3	--	16.7	14.6	9.1	27.8	--
Rhode Island	--	--	--	--	10.7	--	--
South Carolina	15.5	--	--	--	--	--	--
Tennessee	11.7	9.5	--	--	8.6	17.9	--
Texas	10.3	6.3	16.6	7.7	3.6	15.5	--
Utah	15.1	--	--	--	--	--	--
Vermont	14.1	--	--	--	--	--	--
Virginia	14.3	--	16.7	--	12.6	16.7	--
Washington	16.6	15.1	19.0	--	--	10.7	13.1
Wisconsin	14.6	--	13.7	--	14.5	--	--
Hawaii	11.2	21.7	2.2	--	--	--	--

Source: Bureau of the Census, Census of Manufactures, 1939

a/ Including all production, distribution, and supervisory salaries and wages, with the exception of salaries of officers of corporations

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Table 35. Canned fruits and vegetables and related products industry a/: Percentage of employees in union establishments affected by, and percent increase in wage bills resulting directly from, the establishment of 35-cent and 40-cent minima, by branches.

Branch	Union establishments in survey		Employees in union establishments		Adjusted average hourly earnings (cents) b/	Percentage of employees earning less than		Percentage increase in wage bills resulting directly from minimum hourly rates of	
	Number	Percent of total in survey	Number	Percent of total in survey		35 cents	40 cents	35 cents	40 cents
Total, for industry	151	12.0	46,874	21.4	54.9	1.3	6.6	0.1	0.3
Canned and dried fruits and vegetables branch c/	85	8.2	41,451	20.1	54.9	1.2	5.2	*	0.3
All other branches d/	66	30.0	5,423	44.4	55.4	2.7	17.7	0.1	1.1

Source: Wage and Hour Division Questionnaire Survey, 1942.

* Less than 0.05 percent.

a/ Continental United States only (not including Hawaii.)

b/ Adjusted by raising all employees earning less than 30 cents an hour to the statutory minimum of 30 cents.

c/ Includes frozen fruits and vegetables and canned soups.

d/ Preserves, jams, and jellies; pickled fruits and vegetables; salad dressings; flavoring extracts and syrups; vinegar and cider; canned spaghetti, ravioli, chili con carne, pork and beans; and mincemeat, peanut butter, honey, catsup, tomato sauce, and pie fillings.

(12,317)

Table 36. Canned Fruits and Vegetables and Related Products Industry: Percentage of employees affected by, and percent increase in wage bills resulting directly from, the establishment of 35-cent and 40-cent minima, by branches.

Branch	Number of establishments in survey	Number of employees in survey	Adjusted average hourly earnings (cents) a/	Percentage of employees earning less than		Percentage increase in wage bills resulting directly from minimum hourly wage rates of	
				35 cents	40 cents	35 cents	40 cents
Total for industry	1,261	226,904	48.5	16.2	29.3	1.0	3.3
Canned and dried fruits and vegetables branch b/	1,041	214,690	48.5	16.2	29.3	1.1	3.3
Pickled fruits and vegetables branch c/	77	3,535	48.3	18.5	29.5	1.2	3.0
Preserves, jams, and jellies branch	58	3,011	54.5	12.1	26.7	0.7	2.6
All other branches d/	85	5,668	47.7	16.6	33.4	1.2	3.6

Source: Wage and Hour Division Questionnaire Survey, 1942

a/ Adjusted by raising all employees earning less than 30 cents an hour to the statutory minimum of 30 cents.
b/ Includes frozen fruits and vegetables and canned soups.
c/ Includes kraut.
d/ Salad dressings; flavoring extracts and syrups; vinegar and cider; canned spaghetti, ravioli, chili con carne, pork and beans; and mincemeat, peanut butter, honey, catsup, tomato sauce, and pie fillings.

Table 37. Canned fruits and vegetables and related products industry: Distribution of employees according to average hourly earnings, by branches, 1942

Average Hourly Earnings	Total	Canned and dried fruits & vegetables branch a/	Pickled fruits and vegetables branch b/	Preserves, jams and jellies branch	All other branches c/
Less than 30 cents	1.1	1.1	0.7	0.4	1.1
Exactly 30 cents	11.7	11.8	9.5	7.2	12.1
30.1 to 30.9 "	1.2	1.2	0.8	0.3	2.9
31.0 to 31.9 "	0.5	0.6	0.1	0.3	0.5
32.0 to 32.9 "	1.9	2.0	3.0	0.8	1.2
33.0 to 33.9 "	0.8	0.7	3.0	1.4	1.0
34.0 to 34.9 "	0.9	0.9	2.1	1.1	0.4
35.0 to 35.9 "	9.3	9.4	4.3	9.9	6.3
36.0 to 36.9 "	0.3	0.8	1.8	0.8	1.2
37.0 to 37.9 "	2.7	2.7	3.7	1.5	1.1
38.0 to 38.9 "	1.1	0.9	1.4	1.6	7.6
39.0 to 39.9 "	0.9	0.9	0.2	0.8	1.2
Exactly 40 cents	12.1	12.4	11.0	8.1	8.6
40.1 to 44.9 "	7.6	7.5	7.8	4.8	13.0
45.0 to 49.9 "	11.0	11.1	9.9	8.6	9.7
50.0 to 54.9 "	12.4	12.4	13.1	11.4	10.8
55.0 to 59.9 "	6.6	6.6	8.3	6.7	5.2
60.0 to 64.9 "	4.9	4.8	6.5	9.9	4.8
65.0 to 69.9 "	3.8	3.8	2.9	4.9	2.7
70.0 to 74.9 "	4.3	4.3	2.9	6.2	4.0
75.0 to 99.9 "	3.7	3.5	6.0	10.7	5.2
100.0 and over	0.7	0.6	1.0	2.0	1.3
Number of employees in survey d/	226,904	214,690	3,535	3,011	5,668
Adjusted average hourly earnings	48.5	48.5	48.3	54.5	47.7

Source: Wage and Hour Division Questionnaire Survey, 1942

a/ Includes frozen fruits and vegetables and canned soups
b/ Includes kraut
c/ Salad dressings; flavoring extracts and syrups; vinegar and cider; canned spaghetti, ravioli, chili con carne, pork and beans; and mincemeat, peanut butter, honey, catsup, tomato sauce, and pie fillings.
d/ Full earnings distributions were available only for 203,025 employees, (191,153 in canned and dried fruits and vegetables branch, 3,414 in pickled fruits and vegetables branch, and 5,447 in "all other" branches).

Table 38. Canned and dried fruits and vegetables branch a/: Average hourly earnings, by states, 1942

State	Establishments in survey		Employees in survey		Adjusted average hourly earnings (cents) b/
	Number	Percent	Number	Percent	
United States, Total	1,041	100.0	214,690	100.0	48.5
New England States c/	43	4.1	5,303	2.5	45.2
New York	81	7.8	16,280	7.6	46.7
New Jersey and Delaware	26	2.5	13,921	6.5	52.6
Pennsylvania	34	3.3	8,020	3.7	49.4
Ohio	40	3.8	7,621	3.5	45.2
Indiana	59	5.7	12,231	5.7	42.5
Illinois	32	3.1	8,247	3.8	48.2
Michigan	30	2.9	4,330	2.0	46.0
Wisconsin	94	9.0	16,728	7.8	43.1
Iowa	37	3.6	5,917	2.8	42.3
Minnesota	19	1.8	10,504	4.9	47.4
West Central States d/	32	3.1	5,872	2.7	46.1
Maryland	99	9.4	11,415	5.3	39.2
Virginia	62	6.0	6,416	3.0	37.2
Florida	34	3.3	7,083	3.3	38.4
Texas	31	3.0	4,082	1.9	31.4
Arkansas and Missouri e/	79	7.6	7,016	3.3	32.0
Other Southern States f/	43	4.1	6,913	3.2	32.6
Washington	46	4.4	12,300	5.7	63.3
Oregon	24	2.3	10,046	4.7	66.2
California	89	8.5	26,175	12.2	59.8
Hawaii	7	0.7	8,280	3.9	49.8

Source: Wage and Hour Division Questionnaire Survey, 1942.

a/ Including quick-frozen fruits and vegetables, and canned soups.

b/ Adjusted by raising all employees earning less than 30 cents an hour to the statutory minimum of 30 cents.

c/ Maine, 35 establishments; Vermont, 1; New Hampshire, 2; Massachusetts, 3; and Connecticut, 2.

d/ Kansas, 1 establishment; Nebraska, 3; Montana, 2; Wyoming, 1; Idaho, 4; Arizona, 2; Utah, 8; Colorado, 8; and Oklahoma, 2.

e/ Arkansas, 55 establishments; Missouri, 24.

f/ Mississippi, 3 establishments; Louisiana, 7; Georgia, 5; Tennessee, 6; Kentucky, 7; West Virginia, 3; North Carolina, 6; and South Carolina, 6.

(12,317)

Table 39. Canned fruits and vegetables and related products industry: Percentage of employees affected by, and percent increase in wage bills resulting from, the adoption of various possible minimum wage rates.

Minimum hourly rate (cents)	Total			Canned and dried fruits and vegetables branch a/			Pickled fruits and vegetables branch b/			Preserves, jams, and jellies branch			All other branches c/		
	Number of employees	Percentage of employees affected	Percentage increase in wage bill	Number of employees	Percentage of employees affected	Percentage increase in wage bill	Number of employees	Percentage of employees affected	Percentage increase in wage bill	Number of employees	Percentage of employees affected	Percentage increase in wage bill	Number of employees	Percentage of employees affected	Percentage increase in wage bill
31	28214	12.4	0.2	26815	12.5	0.2	376	10.6	0.2	253	8.4	0.1	770	13.6	0.2
32	29323	12.9	0.4	27881	13.0	0.4	380	10.7	0.4	263	8.7	0.2	799	14.1	0.4
33	33243	14.7	0.6	31610	14.7	0.6	481	13.6	0.6	288	9.6	0.4	864	15.2	0.7
34	34867	15.4	0.8	33037	15.4	0.8	583	16.5	0.9	331	11.0	0.5	916	16.2	0.9
35	36737	16.2	1.0	34780	16.2	1.0	653	18.5	1.2	364	12.1	0.7	940	16.6	1.2
36	55531	24.5	1.4	52788	24.6	1.4	801	22.7	1.7	661	22.0	1.0	1281	22.6	1.6
37	57131	25.2	1.9	54235	25.3	1.9	861	24.4	2.1	686	22.8	1.4	1349	23.8	2.0
38	62526	27.6	2.3	59395	27.7	2.3	988	27.9	2.6	732	24.3	1.8	1411	24.9	2.4
39	64672	28.5	2.8	61031	28.4	2.8	1035	29.2	3.2	779	25.9	2.2	1327	32.2	2.9
40	66579	29.3	3.2	62841	29.3	3.2	1042	29.5	3.8	803	26.7	2.6	1893	33.4	3.6
Number of establishments in survey	1261			1041			77			59			85		
Number of employees in survey	226904			214690			3535			3011			5668		
Adjusted average hourly earnings	48.5			48.5			48.3			54.5			47.7		

Source: Wage and Hour Division Questionnaire Survey, 1942

a/ Includes frozen fruits and vegetables and canned soups

b/ Includes kraut

c/ Salad dressings; flavoring extracts and syrups; vinegar and cider; canned spaghetti, ravioli, chili con carne, pork and beans; and mincemeat; peanut butter, honey, catsup, tomato sauce and pie fillings.

(12,317)

Table 40. Canned and dried fruits and vegetables branch a/: Percentage of employees affected by, and percent increase in wage bills resulting directly from, establishment of 35-cent and 40-cent minima, by states

State	Number of establishments in survey	Employees in survey		Percentage of employees earning less than		Percentage increase in wage bills resulting directly from minimum hourly wage rates of	
		Number	Percent	35 cents	40 cents	35 cents	40 cents
United States, Total	1,041	214,690	100.0	16.2	29.3	1.1	3.3
New England States b/	43	5,303	2.5	5.5	31.8	*	3.7
New York	81	16,280	7.6	4.4	20.1	0.2	2.0
New Jersey and Delaware	26	13,921	6.5	3.0	11.9	0.1	0.9
Pennsylvania	34	8,020	3.7	4.7	23.3	0.3	2.2
Ohio	40	7,621	3.5	13.2	31.2	0.8	3.4
Indiana	59	12,221	5.7	16.6	34.2	1.1	4.1
Illinois	32	8,247	3.8	2.0	12.8	0.1	0.8
Michigan	30	4,330	2.0	3.3	19.0	0.1	1.7
Wisconsin	94	16,728	7.8	18.9	39.6	1.1	4.1
Iowa	37	5,917	2.8	5.4	31.6	0.5	3.4
Minnesota	19	10,504	4.9	2.9	23.3	0.2	1.4
West Central States c/	32	5,872	2.7	10.5	31.3	0.4	2.5
Maryland	99	11,415	5.3	28.5	56.3	2.2	8.3
Virginia	62	6,416	3.0	50.8	62.3	5.8	13.4
Florida	34	7,083	3.3	39.3	65.9	3.8	11.1
Texas	31	4,082	1.9	91.2	95.4	13.7	28.5
Arkansas and Missouri d/	79	7,016	3.3	84.6	93.7	12.3	26.5
Other Southern States e/	43	6,913	3.2	81.7	87.9	12.1	25.3
Washington	46	12,300	5.7	0.1	0.3	*	*
Oregon	24	10,046	4.7	0.4	0.7	*	0.1
California	89	26,175	12.2	1.1	1.8	*	0.1
Hawaii	7	8,280	3.9	3.4	11.4	0.3	1.5

Source: Wage and Hour Division Questionnaire Survey, 1942.

* Less than 0.05 percent.

a/ Including quick-frozen fruits and vegetables, and canned soups.

b/ Maine, 35 establishments; Vermont, 1; New Hampshire, 2; Massachusetts, 3; and Connecticut, 2.

c/ Kansas, 1 establishment; Nebraska, 3; Montana, 2; Wyoming, 1; Idaho, 4; Arizona, 2; Utah, 8; Colorado, 8; and Oklahoma, 2.

d/ Arkansas, 55 establishments; Missouri, 24.

e/ Mississippi, 3 establishments; Louisiana, 7; Georgia, 5; Tennessee, 6; Kentucky, 7; West Virginia, 3; North Carolina, 6; and South Carolina, 6.

Table 41. Canned and dried fruits and vegetables branch a/: Percentage of employees affected by, and percent increase in wage bills resulting directly from, the adoption of 35-cent and 40-cent minima, by specific products and states.

Product and State	Number of establishments in survey b/	Number of employees in survey	Adjusted average hourly earnings c/	Percentage of employees earning less than		Percentage increase in wage bills resulting directly from establishment of minimum hourly wage rates of	
				35 cents	40 cents	35 cents	40 cents
Tomatoes, total	261	33890	42.1	33.3	47.6	2.7	7.9
Arkansas and Missouri	54	4252	31.8	86.2	92.8	13.0	27.1
Indiana	44	8674	41.5	20.6	39.7	1.5	5.0
Ohio	15	4796	47.7	10.9	20.3	1.0	2.1
Maryland	43	4091	40.1	26.6	48.7	2.0	6.9
New Jersey and Delaware	12	2169	44.4	6.2	22.3	0.3	2.1
Virginia	47	2716	34.9	66.3	83.9	7.9	19.0
All other states d/	46	7192	45.9	31.6	41.7	2.6	6.1
Peas, total	34	6769	50.6	3.8	20.6	0.1	1.5
Wisconsin	21	3742	44.3	6.0	35.0	0.3	2.7
All other states e/	13	5027	54.9	2.1	9.9	*	0.7
Corn and peas, total	51	11239	46.1	6.1	27.0	0.3	2.3
Wisconsin	27	4538	44.3	7.6	36.1	0.3	2.9
All other states f/	24	6751	47.1	5.0	20.8	0.3	2.0
Corn, total g/	86	13885	44.2	5.9	27.8	0.4	2.7
Frozen and cold-pack foods, total	35	7023	49.3	16.9	28.3	1.0	3.3
Dried and dehydrated foods, total	36	4237	62.0	0.5	1.3	*	0.1

Source: Wage and Hour Division Questionnaire Survey, 1942

* Less than 0.05 percent.

a/ Including quick-frozen fruits and vegetables and canned soups.

b/ Only those establishments whose principal product constituted more than 80 percent of the total pack were considered as primarily engaged in the production of the products shown in this table.

c/ Adjusted by raising all employees earning less than 30 cents an hour to the statutory minimum of 30 cents an hour.

d/ Connecticut, 1 establishment; New York, 2; Pennsylvania, 5; Illinois, 4; Michigan, 3; Wisconsin, 1; Iowa, 5; Utah, 2; Colorado, 1; Oklahoma, 1; California, 4; Florida, 1; Texas, 1; Louisiana, 1; Tennesse 4; Kentucky, 7; West Virginia, 2; and South Carolina, 1.

e/ Maine, 1 establishment; New York, 1; Delaware, 1; Montana, 1; Utah, 1; Colorado, 1; Washington, 5; Oregon, 2.

f/ New York, 6 establishments; Indiana, 1; Illinois, 3; Iowa, 1; Minnesota, 6; Maryland 7.

g/ Maine, 15 establishments; New Hampshire, 1; New York, 1; Pennsylvania, 6; Maryland, 17; Iowa, 22; Ohio, 9; Indiana, 1; Illinois, 5; Minnesota, 7; Idaho, 2.

Estimated Increase in Wage Bills

The estimated direct increases in wage bills that would result from the establishment of various minimum hourly rates, shown in table 39, were obtained by computing the direct effects on the wage bill if all employees earning less than the specified rates were raised to those rates. An analysis of the increase if the minimum were raised to 35 cents and 40 cents per hour is made by branches of the industry for illustrative purposes in table 36. The direct increase for the industry as a whole if a 35 cent minimum were established, it will be seen, is 1.0 percent, and the direct increase resulting from the establishment of a 40 cent minimum is 3.3 percent. 1/ The estimated direct increases for branches of the industry required by a 35 cent minimum range from 0.7 percent for the preserves, jams and jellies branch to 1.2 percent for the pickled fruits and vegetables branch, while the increases required by a 40 cent minimum would range from 2.6 percent to 3.8 percent respectively for these branches.

Illustrations of increases in the wage bill for particular states are shown in table 40 for the canned and dried fruits and vegetables branch. It will be seen that the percentages of employees in each state earning less than 35 cents per hour range from 0.1 percent in Washington to 91.2 percent in Texas. Those earning less than 40 cents per hour range from 0.3 percent in Washington to 95.4 percent for Texas. If a minimum of 35 cents, for example, were adopted, the wage bill increases would range from less than .05 percent for the Pacific Coast and New England states to 13.7 percent for Texas. If a minimum of 40 cents per hour be adopted, the increases would range from less than .05 percent for the state of Washington to 28.5 percent for Texas.

Data concerning direct increases in wage bills, and percentages of employees earning less than certain rates per hour, in this case 35 cents and 40 cents for illustrative purposes, are shown in table 41 for various products and states. Dried and dehydrated fruits and vegetables, it will be seen, would be least affected, while tomatoes would be the most affected of the products shown. Table 42 shows the number of establishments, and the number of employees in those establishments, that would sustain increases in their wage bills of various percentages as a result of the adoption of two possible minimum wage hourly rates, namely, 35 cents and 40 cents.

Ratio of Labor Cost to Total Cost

The study made by the Women's Bureau 2/ indicated that direct labor costs amounted to about 12.5 percent of total costs for canned fruits and vegetables in 1939. This figure appears to be reasonable in light of other data: the 1939 Census data show that the ratio of wages to value of products was 11.1 percent 3/ and a study by the Federal Trade Commission 4/ showed direct product-

1/ Since the wage data were obtained for periods of peak employment, when average hourly earnings for the plant as a whole are generally lower than during the rest of the year, the results shown by the survey indicate fairly accurately the situation during peak employment, but probably somewhat overestimate the proportion of employees affected and the wage bill increases on a year-round basis.

2/ Women's Bureau, ibid

3/ Value of products, composed of total costs plus profits or minus losses, is different than total costs by varying amounts.

4/ Industrial Corporation Reports, Fruit and Vegetable Canning Corporations, Mar. 4, 1941

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Table 42. Canned fruits and vegetables and related products industry: Distribution of establishments and employees according to percent increase in wage bill of each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by branches

Branch and percentage increase in wage bill of establishment	Minimum Hourly Wage Rates: 35 cents: Number of establishments in survey	35 cents: Cumulative percentage	35 cents: Number of employees in survey	35 cents: Cumulative percentage	40 cents: Number of establishments in survey	40 cents: Cumulative percentage	40 cents: Number of employees in survey	40 cents: Cumulative percentage
Total for industry	1,261		226,904		1,261		226,904	
Canned and dried fruits and vegetables branch, a/ total	1,041		214,690		1,041		214,690	
No increase	349	34	82,666	39	199	19	54,531	25
0.1 to 0.9 percent	275	60	78,558	75	143	33	59,908	53
1.0 to 4.9 percent	160	75	23,064	86	197	52	37,303	71
5.0 to 9.9 percent	84	83	12,212	92	181	69	25,294	82
10.0 to 14.9 percent	78	91	7,685	95	69	76	9,034	87
15.0 to 19.9 percent	95	100	10,505	100	51	81	7,323	90
20.0 to 24.9 percent	-	-	-	-	33	84	3,623	92
25.0 to 29.9 percent	-	-	-	-	54	89	5,300	94
30.0 to 33.3 percent	-	-	-	-	114	100	12,374	100
Pickled fruits and vegetables branch, b/ total	77		3,535		77		3,535	
No increase	43	55	1,600	44	27	35	854	23
0.1 to 0.9 percent	12	71	1,009	72	12	50	995	51
1.0 to 4.9 percent	11	86	392	85	16	71	781	73
5.0 to 9.9 percent	8	96	506	98	9	82	323	82
10.0 to 14.9 percent	1	97	21	99	3	87	41	85
15.0 to 19.9 percent	2	100	7	100	5	94	203	91
20.0 to 24.9 percent	-	-	-	-	2	96	295	98
25.0 to 29.9 percent	-	-	-	-	1	97	21	99
30.0 to 33.3 percent	-	-	-	-	2	100	7	100
Preserves, jams and jellies branch, total	58		3,011		58		3,011	
No increase	35	59	1,472	48	24	41	1,127	37
0.1 to 0.9 percent	9	75	707	71	4	47	141	41
1.0 to 4.9 percent	9	91	662	94	14	71	1,269	83
5.0 to 9.9 percent	3	97	98	98	6	83	143	89
10.0 to 14.9 percent	1	98	67	99	5	92	227	97
15.0 to 19.9 percent	1	100	5	100	3	97	32	98
20.0 to 24.9 percent	-	-	-	-	1	98	67	99
25.0 to 29.9 percent	-	-	-	-	-	98	-	99
30.0 to 33.3 percent	-	-	-	-	1	100	5	100
All other branches, c/ total	85		5,668		85		5,668	
No increase	54	65	2,167	39	34	41	1,612	29
0.1 to 0.9 percent	8	75	2,193	79	12	55	1,549	57
1.0 to 4.9 percent	9	84	352	83	11	69	1,004	76
5.0 to 9.9 percent	6	90	477	91	10	79	284	78
10.0 to 14.9 percent	7	99	478	99	5	85	284	84
15.0 to 19.9 percent	1	100	1	100	3	88	41	84
20.0 to 24.9 percent	-	-	-	-	5	94	461	92
25.0 to 29.9 percent	-	-	-	-	3	98	424	99
30.0 to 33.3 percent	-	-	-	-	2	100	9	100

Source: Wage and Hour Division Questionnaire Survey, 1942.

a/ Includes frozen fruits and vegetables and canned soups.

b/ Includes kraut.

c/ Salad dressings; flavoring extracts and syrups; vinegar and cider; canned spaghetti, ravioli, chili con carne, pork and beans; and mincemeat, peanut butter, honey, catsup, tomato sauce, and pie fillings.

(12,317)

ion wages and salaries to be 10.4 percent of total costs. The Federal Trade Commission study, however, concerned itself with large firms, in which labor costs were lower than the average.

The ratio of wages to value of products varies with the size of the establishment, the ratio ranging from 8 percent in the largest canning plants to 15.9 percent in the smallest plants, according to the 1939 Census. A variation in this ratio also exists among the states, the ratio in the important canning states ranging from 12.6 percent for California to 8.5 percent for Illinois; Maryland and New York were 10.4 percent and 10.5 percent respectively. (Tables 10 to 16.)

In computing the ratios in this report, labor costs were taken to include all salaries and wages paid to manufacturing, distribution, construction, and other employees, with the exception of salaries paid to officers of corporations. This resulted in ratios higher than those obtained by using wages only, the ratio for the canned and dried fruits and vegetables branch being, as table 34 indicates, 13.2 percent. The ratio for the preserves, jams, jellies and fruit butters branch is 12.1 percent; pickled fruits and vegetables branch, 14.5 percent; salad dressings branch, 8 percent; flavoring extracts and syrups branch, 6.8 percent; vinegar and cider branch, 16 percent; and quick-frozen foods branch, 18.6 percent.

Estimated Increase in Production Costs.

By multiplying the percentages of labor cost to value of products in table 34 by the estimated direct increases in labor cost, the direct increases in production costs which would result from the establishment of various minima can be estimated. 1/ In table 43 the estimated increases if the minimum were raised to 35 cents or 40 cents are shown as examples. It will be seen that the direct increase in production costs for the industry as a whole, if the minimum were raised to 35 cents, would be 0.1 percent, while if the minimum were set at 40 cents, the direct increase would be 0.4 percent. Increases for branches of the industry can also be seen in this table. Estimated increases for individual states in the canned and dried fruits and vegetables branch are shown in table 44; these range from inconsequential amounts for the Pacific Coast States to 3.8 percent for the group of "other Southern States," if the highest possible minimum, 40 cents per hour, be established. The increases directly required by a 35-cent minimum are also shown as an example.

Some Qualifications Regarding the Data

The computations derived from the questionnaire survey data are intended to indicate only the direct effects which would occur if the only changes in wages, employment or other labor conditions were those resulting directly from the adoption of the minimum wage rate.

Changes in efficiency are not taken into account, nor is any estimate made of possible indirect cost increases resulting from the payment of higher wages to workers who might seek to maintain their existing wage differentials over those employees who are directly affected. The importance of these indirect effects is contingent on a number of factors which do not lend themselves to

1/ The fact that value of products is different than cost of production does not significantly alter the conclusions in this type of analysis, except in those cases where profits or losses are exceptionally large.

Table 43. Canned fruits and vegetables and related products industry: Estimated percent increase in production cost which would result directly from the adoption of 35-cent and 40-cent minima, by branches

Branch	Number of establishments in survey	Number of employees in survey	Labor cost ratio a/	Percentage increase in wage bills		Estimated percentage increase in production costs	
				35 cents	40 cents	35 cents	40 cents
Total, for industry	1,261	226,904	12.1	1.0	3.2	0.1	0.4
Canned and dried fruits and vegetables branch b/	1,041	214,690	13.2	1.1	3.3	0.1	0.4
Pickled fruits and vegetables branch c/	77	3,535	14.5	1.2	3.8	0.2	0.6
Preserves, jams and jellies branch	58	3,011	12.1	0.7	2.6	0.1	0.3
All other branches d/	85	5,668	10.3 e/	1.2	3.6	0.1	0.4

Source: Wage bill increases from Wage and Hour Division Questionnaire Survey, 1942; labor cost ratio from 1939 Census of Manufactures data.

a/ Ratio of all production, distribution, and supervisory salaries and wages, with the exception of salaries of officers of corporations, to value of products, expressed as a percentage.
b/ Includes frozen fruits and vegetables and canned soups.
c/ Includes kraut.
d/ Salad dressings; flavoring extracts and syrups; vinegar and cider; canned spaghetti, ravioli, chili con carne, pork and beans; and mincemeat, peanut butter, honey, catsup, tomato sauce, and pie fillings.
e/ Arithmetic average of the percentages for salad dressings, flavoring extracts and syrups, and vinegar and cider branches. This average appears to be more representative of the group than the weighted average, which was only 7.4%.

Table 44. Canned and dried fruits and vegetables branch a/: Estimated percent increase in production cost which would result directly from the adoption of 35-cent and 40-cent minima, by states

State or region	Number of establishments in survey	Number of employees in survey	Labor cost ratio b/	Percent increase in wage bills		Estimated percent increase in production costs	
				35 cents	40 cents	35 cents	40 cents
United States, total	1,041	214,690	13.2	1.1	3.3	0.1	0.4
New England States c/	43	5,303	14.7	*	3.7	*	0.5
New York	81	16,280	13.1	0.2	2.0	*	0.3
New Jersey and Delaware	26	13,921	13.2 d/	0.1	0.9	*	0.1
Pennsylvania	34	8,020	11.3	0.3	2.2	*	0.2
Ohio	40	7,621	14.1	0.8	3.4	0.1	0.5
Indiana	59	12,221	13.9	1.1	4.1	0.2	0.6
Illinois	32	8,247	10.6	0.1	0.8	*	0.1
Michigan	30	4,330	13.8	0.1	1.7	*	0.2
Wisconsin	94	16,728	14.6	1.1	4.1	0.2	0.6
Iowa	37	5,917	17.9	0.5	3.4	0.1	0.6
Minnesota	19	10,504	13.9	0.2	1.4	*	0.2
West Central States e/	32	5,872	16.1	0.4	2.5	0.1	0.4
Maryland	99	11,415	12.1	2.2	8.3	0.3	1.0
Virginia	62	6,416	14.3	5.8	13.4	0.8	1.9
Florida	34	7,083	16.5	3.8	11.1	0.6	1.8
Texas	31	4,082	10.3	13.7	28.5	1.4	2.9
Arkansas and Missouri	79	7,016	11.3	12.3	26.5	1.4	3.0
Other Southern States f/	43	6,913	15.0	12.1	25.3	1.8	3.8
Washington	46	12,300	16.6	*	*	*	*
Oregon	24	10,046	14.4	*	0.1	*	*
California	89	26,175	14.7	*	0.1	*	*
Hawaii	7	8,280	11.2	0.3	1.5	*	0.2

Source: Wage bill increases from Wage and Hour Division Questionnaire Survey, 1942; labor cost ratios from 1939 Census of Manufacturers data.

* Less than 0.05 percent.

a/ Includes quick-frozen fruits and vegetables, and canned soups.

b/ Ratio of all production, distribution, and supervisory salaries and wages, with the exception of salaries of officers of corporations, to value of products, expressed as a percentage.

c/ Includes Maine, Vermont, New Hampshire, Massachusetts and Connecticut. Labor cost ratios available for Maine and Vermont only.

d/ Average percentage for entire U. S., as no ratio was available for New Jersey.

e/ Includes Kansas, Nebraska, Oklahoma, Montana, Wyoming, Idaho, Arizona, Utah and Colorado. Labor cost ratios available for Montana, Idaho, Utah, and Colorado only.

f/ Includes Alabama, Mississippi, Louisiana, Georgia, Tennessee, Kentucky, West Virginia, North Carolina and South Carolina. Labor cost ratios available for Mississippi, Louisiana, Georgia, Tennessee, Kentucky and South Carolina only.

(12,317)

statistical treatment. Of considerable importance in this respect are such factors as the nature of the wage distribution in each establishment, the occupational or social cohesion of the workers, the methods of wage payment, (whether piece or time rates), the normal bargaining power of each of the parties, and general business conditions which affect the ability of each employer to accede to further wage demands. At the present time, furthermore, wage rates of over 40 cents per hour can be raised only in accordance with War Labor Board orders.

State Minimum Wage Laws

Six states and the District of Columbia have minimum wage laws which prescribe rates higher than 30 cents an hour and apply to the canned and preserved fruits and vegetables and related products industry. Of these, California, Massachusetts, Oregon, and Washington have laws which apply specifically to this industry, while the laws of Minnesota, Nevada, and the District of Columbia apply to all manufacturing industries. The minimum rates affect only women and minors in every case. They range from 32.4 cents an hour in Massachusetts to 52.5 cents an hour in Oregon. A summary of these laws is in Table 45.

Table 45. Canned fruits and vegetables and related products industry: Minimum hourly rates under state laws for experienced workers, 1942

State	Occupation covered and effective date	Minimum hourly rates for experienced workers
California	Fruit and Vegetable canning - 9/14/29	33 1/3¢
	Dried Fruit Packing 8/8/23	33 1/3¢
	Manufacturing generally (canning, preserving, and freezing of fruits and vegetables excluded) 8/3/23	45¢
Massachusetts	Canning and preserving and minor lines of food preparations - 3/2/39	32.4¢
Minnesota	Any industry in towns with population over 50,000 7/11/38	36¢
Nevada	Any private employment 5/28/37	37 1/2¢
Oregon	Canning fresh fruits and vegetables and preserving fruits - 4/1/42	52 1/2¢
	Stemming and pitting brine cherries - 7/22/41	35¢
	Any manufacturing establishment - 7/22/41	35¢
Washington	Cannery (any product preserved for food purposes) - 5/6/37	37 1/2¢
District of Columbia	Manufacturing - 6/5/39	40¢

(12,367)

Appendix table 1. Canned fruits and vegetables and related products industry: Distribution of union establishments and their employees according to percent increase in wage bill, resulting directly from the adoption of 35-cent and 40-cent minima, by branches of each establishment.

Branch, and percentage increase in wage bill of establishment	Minimum hourly wage rates: 35 cents: Number of union establishments in survey	35 cents: Cumulative percentage	35 cents: Number of employees in survey	35 cents: Cumulative percentage	40 cents: Number of union establishments in survey	40 cents: Cumulative percentage	40 cents: Number of employees in survey	40 cents: Cumulative percentage
Total, for industry	151		46874		151		46874	
No increase	107	71	21818	47	81	54	17338	37
0.1 to 0.9 percent	38	96	24256	98	46	84	24472	89
1.0 to 4.9 percent	3	98	527	99	18	96	4353	98
5.0 to 9.9 percent	3	100	273	100	2	97	314	99
10.0 to 14.9 percent	-	-	-	-	1	98	124	99
15.0 to 19.9 percent	-	-	-	-	3	100	273	100
Canned and dried fruits and vegetables branch, a/ total.	85		41451		85		41451	
No increase	53	62	18610	45	44	52	15105	36
0.1 to 0.9 percent	29	96	22164	98	34	92	23536	93
1.0 to 4.9 percent	2	99	443	99	5	98	2274	99
5.0 to 9.9 percent	1	100	234	100	1	99	302	99
10.0 to 14.9 percent	-	-	-	-	---	99	---	99
15.0 to 19.9 percent	-	-	-	-	1	100	234	100
All other branches b/ total	66		5423		66		5423	
No increase	54	82	3208	59	37	56	2233	41
0.1 to 0.9 percent	9	95	2092	98	12	74	936	58
1.0 to 4.9 percent	1	97	84	99	13	94	2079	97
5.0 to 9.9 percent	2	100	39	100	1	95	12	97
10.0 to 14.9 percent	-	-	-	-	1	97	124	99
15.0 to 19.9 percent	-	-	-	-	2	100	39	100

Source: Wage and Hour Division Questionnaire Survey, 1942.

a/ Includes frozen fruits and vegetables and canned soups.

b/ Preserves, jams, and jellies; pickled fruits and vegetables; salad dressings; flavoring extracts and syrups; vinegar and cider; canned spaghetti, ravioli, chili con carne, pork and beans; and mincemeat, peanut butter, honey, catsup, tomato sauce, and pie fillings.

(12317)

Appendix Table 2. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states.

State and percentage increase in wage bill of establishment	Minimum hourly wage rates							
	35 cents				40 cents			
	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage
United States, total	1041		214690		1041		214690	
No increase	349	34	82666	39	199	19	54531	25
0.1 to 0.9 percent	275	60	78558	75	143	33	59908	53
1.0 to 4.9 "	160	75	23064	86	197	52	37303	71
5.0 to 9.9 "	84	83	12212	92	181	69	25294	82
10.0 to 14.9 "	78	91	7635	95	69	76	9034	87
15.0 to 19.9 "	95	100	10505	100	51	81	7323	90
20.0 to 24.9 "	—	—	—	—	33	84	3623	92
25.0 to 29.9 "	—	—	—	—	54	89	5300	94
30.0 to 33.3 "	—	—	—	—	114	100	12374	100
New England States, total b/	43		5303		43		5303	
No increase	29	67	3272	62	11	26	1037	20
0.1 to 0.9 percent	9	88	1623	92	2	30	282	25
1.0 to 4.9 "	1	91	41	93	10	53	2239	67
5.0 to 9.9 "	3	98	233	97	16	91	1378	93
10.0 to 14.9 "	1	100	134	100	1	93	111	95
15.0 to 19.9 "	-	—	—	—	2	98	122	97
20.0 to 24.9 "	-	—	—	—	1	100	134	100
New York, total	81		16280		81		16280	
No increase	45	56	6168	38	18	22	1711	11
0.1 to 0.9 percent	31	94	9254	95	23	51	8717	64
1.0 to 4.9 "	3	98	244	96	13	67	1909	76
5.0 to 9.9 "	2	100	614	100	24	96	3185	95
10.0 to 14.9 "	-	—	—	—	3	100	758	100
New Jersey and Delaware, total	26		13921		26		13921	
No increase	11	42	10764	77	4	15	9187	66
0.1 to 0.9 percent	8	73	2651	96	3	27	1074	74
1.0 to 4.9 "	4	88	366	98	9	62	2926	95
5.0 to 9.9 "	2	96	92	99	7	88	594	98
10.0 to 14.9 "	1	100	48	100	-	88	—	98
15.0 to 19.9 "	-	—	—	—	2	96	92	99
20.0 to 24.9 "	-	—	—	—	-	96	—	99
25.0 to 29.9 "	-	—	—	—	1	100	48	100
Pennsylvania, total	34		8020		34		8020	
No increase	14	41	4510	56	5	15	2234	28
0.1 to 0.9 percent	13	79	2784	91	6	32	2901	64
1.0 to 4.9 "	4	91	565	98	9	59	1225	79
5.0 to 9.9 "	2	97	69	99	7	79	1047	92
10.0 to 14.9 "	1	100	92	100	3	88	397	97
15.0 to 19.9 "	-	—	—	—	2	97	69	99
20.0 to 24.9 "	-	—	—	—	1	100	92	100
25.0 to 29.9 "	-	—	—	—				

Appendix Table 2. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states (continued).

State and percentage increase in wage bill of establishment	Minimum hourly wage rates							
	35 cents				40 cents			
	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage
Ohio, total	40		7621		40		7621	
No increase	7	18	2274	30	3	8	58	1
0.1 to 0.9 percent	15	55	2671	65	5	20	3368	45
1.0 to 4.9 "	16	95	2486	98	8	40	949	57
5.0 to 9.9 "	2	100	190	100	16	80	2509	90
10.0 to 14.9 "	-	—	—	—	6	95	559	98
15.0 to 19.9 "	-	—	—	—	2	100	178	100
Indiana, total	59		12221		59		12221	
No increase	8	14	969	8	5	8	612	5
0.1 to 0.9 percent	26	58	6569	62	6	19	2537	26
1.0 to 4.9 "	22	95	4266	97	23	58	4885	66
5.0 to 9.9 "	2	98	301	99	13	80	2509	86
10.0 to 14.9 "	1	100	116	100	7	92	1077	95
15.0 to 19.9 "	-	—	—	—	3	97	413	98
20.0 to 24.9 "	-	—	—	—	1	98	72	99
25.0 to 29.9 "	-	—	—	—	1	100	116	100
Illinois, total	31		8247		22		8247	
No increase	17	53	4673	57	9	28	2250	27
0.1 to 0.9 percent	10	84	3279	96	10	59	4208	78
1.0 to 4.9 "	4	97	264	99	8	84	1407	95
5.0 to 9.9 "	-	97	—	99	2	91	242	98
10.0 to 14.9 "	1	100	31	100	1	94	33	98
15.0 to 19.9 "	-	—	—	—	1	97	76	99
20.0 to 24.9 "	-	—	—	—	-	97	—	99
25.0 to 29.9 "	-	—	—	—	-	97	—	99
30.0 to 33.3 "	-	—	—	—	1	100	31	100
Michigan, total	30		4330		30		4330	
No increase	20	67	2797	65	10	33	1275	29
0.1 to 0.9 percent	7	90	1047	89	6	53	1175	57
1.0 to 4.9 "	3	100	486	100	5	70	874	77
5.0 to 9.9 "	-	—	—	—	6	90	813	96
10.0 to 14.9 "	-	—	—	—	3	100	193	100
Wisconsin, total	94		16728		94		16728	
No increase	25	27	4542	27	5	5	636	4
0.1 to 0.9 percent	26	54	5787	62	4	10	1247	11
1.0 to 4.9 "	33	89	4821	91	47	60	9234	66
5.0 to 9.9 "	8	98	1356	99	21	82	3259	86
10.0 to 14.9 "	2	100	222	100	10	93	1253	93
15.0 to 19.9 "	-	—	—	—	5	98	877	98
20.0 to 24.9 "	-	—	—	—	1	99	98	99
25.0 to 29.9 "	-	—	—	—	1	100	124	100

Appendix Table 2. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states (continued).

State and percentage increase in wage bill of establishment	Minimum hourly wage rates: 35 cents — Number of establishments in survey	35 cents — Cumulative percentage	35 cents — Number of employees in survey	35 cents — Cumulative percentage	40 cents — Number of establishments in survey	40 cents — Cumulative percentage	40 cents — Number of employees in survey	40 cents — Cumulative percentage
Iowa, total	37		5917		37		5917	
No increase	17	46	2982	50	8	22	1584	27
0.1 to 0.9 percent	13	81	2310	89	6	38	1460	51
1.0 to 4.9 "	2	86	177	92	4	49	754	64
5.0 to 9.9 "	4	97	429	99	14	86	1671	92
10.0 to 14.9 "	1	100	19	100	-	86	—	92
15.0 to 19.9 "	-	—	—	—	2	92	235	96
20.0 to 24.9 "	-	—	—	—	2	97	194	99
25.0 to 29.9 "	-	—	—	—	1	100	19	100
Minnesota, total	19		10504		19		10504	
No increase	6	32	2324	22	2	11	1226	12
0.1 to 0.9 percent	10	84	7422	93	6	42	5028	60
1.0 to 4.9 "	3	100	758	100	7	79	3292	91
5.0 to 9.9 "	-	—	—	—	3	95	688	97
10.0 to 14.9 "	-	—	—	—	1	100	270	100
West Central States, total c/	32		5872		32		5872	
No increase	15	47	2447	42	5	16	716	12
0.1 to 0.9 percent	9	75	2332	81	7	38	1531	38
1.0 to 4.9 "	5	91	944	97	11	72	2488	81
5.0 to 9.9 "	1	94	26	98	5	88	859	95
10.0 to 14.9 "	1	97	78	99	1	91	129	97
15.0 to 19.9 "	1	100	45	100	1	94	26	98
20.0 to 24.9 "	-	—	—	-	-	94	—	98
25.0 to 29.9 "	-	—	—	-	1	97	78	99
30.0 to 33.3 "	-	—	—	-	1	100	45	100
Washington, total	46		12300		46		12300	
No increase	39	85	8345	70	35	76	8373	68
0.1 to 0.9 percent	7	100	3654	100	10	98	3917	99
1.0 to 4.9 "	-	—	—	=	1	100	10	100
Oregon, total	24		10046		24		10046	
No increase	15	62	5736	57	13	54	4492	45
0.1 to 0.9 percent	8	96	4288	99	10	96	5532	99
1.0 to 4.9 "	1	100	22	100	-	96	—	99
5.0 to 9.9 "	-	—	—	—	-	96	—	99
10.0 to 14.9 "	-	—	—	—	-	96	—	99
15.0 to 19.9 "	-	—	—	—	1	100	22	100
California, total	89		26175		89		26175	
No increase	64	72	12022	46	55	62	11188	43
0.1 to 0.9 percent	22	97	13912	99	29	94	14514	98
1.0 to 4.9 "	3	100	241	100	3	98	363	99
5.0 to 9.9 "	-	—	—	-	2	100	110	100

(12,317)

Appendix Table 2. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states (continued).

State and percentage increase in wage bill of establishment	Minimum hourly wage rates: 35 cents — Number of establishments in survey	35 cents — Cumulative percentage	35 cents — Number of employees in survey	35 cents — Cumulative percentage	40 cents — Number of establishments in survey	40 cents — Cumulative percentage	40 cents — Number of employees in survey	40 cents — Cumulative percentage
Maryland, total	99		11415		99		11415	
No increase	6	6	449	4	6	6	449	4
0.1 to 0.9 percent	41	47	4398	42	5	11	414	8
1.0 to 4.9 "	36	84	4393	81	28	39	2729	31
5.0 to 9.9 "	13	97	1898	98	28	68	2966	57
10.0 to 14.9 "	2	99	67	98	19	87	3446	88
15.0 to 19.9 "	1	100	210	100	6	93	629	93
20.0 to 24.9 "	-	—	—	-	5	98	530	98
25.0 to 29.9 "	-	—	—	-	1	99	42	98
30.0 to 33.3 "	-	—	—	-	1	100	210	100
Virginia, total	62		6416		62		6416	
No increase	2	3	579	9	1	2	540	8
0.1 to 0.9 percent	6	13	1585	34	1	3	1105	26
1.0 to 4.9 "	10	29	679	44	3	8	291	30
5.0 to 9.9 "	10	45	1411	66	8	21	623	40
10.0 to 14.9 "	10	61	799	79	4	27	253	44
15.0 to 19.9 "	24	100	1363	100	8	40	735	55
20.0 to 24.9 "	-	—	—	-	3	45	707	66
25.0 to 29.9 "	-	—	—	-	7	56	527	75
30.0 to 33.3 "	-	—	—	-	27	100	1635	100
Florida, total	34		7083		34		7083	
No increase	3	9	101	1	-	0	—	0
0.1 to 0.9 percent	9	35	1849	28	2	6	347	5
1.0 to 4.9 "	5	50	1784	53	7	26	1668	28
5.0 to 9.9 "	10	79	2590	89	4	38	1522	50
10.0 to 14.9 "	4	91	469	96	4	50	197	53
15.0 to 19.9 "	3	100	290	100	9	76	2565	89
20.0 to 24.9 "	-	—	—	-	1	79	25	89
25.0 to 29.9 "	-	—	—	-	3	88	356	94
30.0 to 33.3 "	-	—	—	-	4	100	403	100
Texas, total	31		4082		31		4082	
No increase	-	0	—	0	-	0	—	0
0.1 to 0.9 percent	-	0	—	0	-	0	—	0
1.0 to 4.9 "	1	3	94	2	-	0	—	0
5.0 to 9.9 "	4	16	417	13	1	3	94	2
10.0 to 14.9 "	15	65	1778	56	-	3	—	2
15.0 to 19.9 "	11	100	1793	100	2	10	306	10
20.0 to 24.9 "	-	—	—	-	2	16	111	13
25.0 to 29.9 "	-	—	—	-	10	48	1068	39
30.0 to 33.3 "	-	—	—	-	16	100	2503	100
Arkansas and Missouri total d/	79		7016		79		7016	
No increase	1	1	21	*	1	1	21	*
0.1 to 0.9 percent	2	4	195	3	1	3	148	2
1.0 to 4.9 "	2	6	110	5	-	3	—	2
5.0 to 9.9 "	16	27	1510	26	-	3	—	2
10.0 to 14.9 "	23	56	2269	59	5	9	327	7
15.0 to 19.9 "	35	100	2911	100	5	15	514	14
20.0 to 24.9 "	-	—	—	—	8	27	826	26
25.0 to 29.9 "	-	—	—	—	18	49	1939	54
30.0 to 33.3 "	-	—	—	—	40	100	3241	100

Appendix Table 2. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states (concluded)

State and percentage increase in wage bill of establishment	Minimum hourly wage rates: 35 cents: Number of establishments in survey	35 cents: Cumulative percentage	35 cents: Number of employees in survey	35 cents: Cumulative percentage	40 cents: Number of establishments in survey	40 cents: Cumulative percentage	40 cents: Number of employees in survey	40 cents: Cumulative percentage
Other Southern States, total c/	43		6913		43		6913	
No increase	-	0	—	0	-	0	—	0
0.1 to 0.9 percent	2	5	434	6	1	2	403	6
1.0 to 4.9 "	2	9	323	11	1	5	60	7
5.0 to 9.9 "	4	19	700	21	1	7	263	11
10.0 to 14.9 "	15	53	1563	44	1	9	31	11
15.0 to 19.9 "	20	100	3893	100	1	12	478	18
20.0 to 24.9 "	-	-	—	-	5	23	481	25
25.0 to 29.9 "	-	-	—	-	9	44	891	38
30.0 to 33.3 "	-	-	—	-	24	100	4306	100

Source: Wage and Hour Division Questionnaire Survey, 1942.

* Less than 1 percent

a/ Including quick-frozen fruits and vegetables and canned soups

b/ Maine, 35 establishments; Massachusetts, 3; New Hampshire, 2; Vermont, 1; and Connecticut, 2.

c/ Kansas, 1 establishment; Nebraska, 3; Montana, 2; Wyoming, 1; Idaho, 4; Arizona, 2; Utah, 8; Colorado, 8; and Oklahoma, 2.

d/ Arkansas 55 establishments; Missouri 24.

e/ Mississippi, 3 establishments; Louisiana, 7; Georgia, 5; Tennessee, 6; Kentucky, 7; West Virginia, 3; North Carolina, 6; and South Carolina, 6.

Appendix table 3. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees engaged primarily in the canning of tomatoes according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states

State and percentage increase in wage bill of establishment	Minimum Hourly Wage Rates: 35 cents: Number of establishments in survey	35 cents: Cumulative percentage	35 cents: Number of employees in survey	35 cents: Cumulative percentage	40 cents: Number of establishments in survey	40 cents: Cumulative percentage	40 cents: Number of employees in survey	40 cents: Cumulative percentage
United States, total	261		33,890		261		33,890	
No increase	21	8	5,813	17	10	4	1,731	5
0.1 to 0.9 percent	56	30	10,237	43	13	9	7,037	26
1.0 to 4.9 percent	70	56	8,851	74	47	27	7,018	47
5.0 to 9.9 percent	27	67	2,363	81	54	48	6,959	67
10.0 to 14.9 percent	30	78	2,502	88	22	56	2,194	74
15.0 to 19.9 percent	57	100	4,074	100	15	62	1,369	78
20.0 to 24.9 percent	-	-	-	-	13	67	956	81
25.0 to 29.9 percent	-	-	-	-	23	75	1,735	86
30.0 to 33.3 percent	-	-	-	-	64	100	4,791	100
Arkansas and Missouri, total	54		4,252		54		4,252	
No increase	-	0	-	0	-	0	-	0
0.1 to 0.9 percent	1	2	143	3	1	2	143	3
1.0 to 4.9 percent	1	4	64	5	-	2	-	3
5.0 to 9.9 percent	11	24	852	25	-	2	-	3
10.0 to 14.9 percent	13	48	1,004	49	3	7	234	9
15.0 to 19.9 percent	28	100	2,184	100	3	13	353	17
20.0 to 24.9 percent	-	-	-	-	6	24	329	25
25.0 to 29.9 percent	-	-	-	-	10	43	759	43
30.0 to 33.3 percent	-	-	-	-	31	100	2,429	100
Indiana, total	44		8,674		44		8,674	
No increase	4	9	779	9	2	5	528	6
0.1 to 0.9 percent	18	50	3,866	54	3	11	763	15
1.0 to 4.9 percent	19	93	3,672	95	16	48	3,552	56
5.0 to 9.9 percent	2	98	301	99	13	77	2,509	85
10.0 to 14.9 percent	1	100	116	100	6	91	833	94
15.0 to 19.9 percent	-	-	-	-	2	95	301	98
20.0 to 24.9 percent	-	-	-	-	1	98	72	99
25.0 to 29.9 percent	-	-	-	-	1	100	116	100
Ohio, total	15		4,796		15		4,796	
No increase	1	7	1,823	38	-	0	-	0
0.1 to 0.9 percent	5	40	1,583	71	3	20	3,044	63
1.0 to 4.9 percent	9	100	1,390	100	1	27	147	67
5.0 to 9.9 percent	-	-	-	-	10	93	1,525	98
10.0 to 14.9 percent	-	-	-	-	1	100	80	100
Maryland, total	43		4,091		43		4,091	
No increase	1	2	89	2	1	2	89	2
0.1 to 0.9 percent	18	44	1,421	37	1	5	36	3
1.0 to 4.9 percent	22	95	2,269	92	16	42	1,354	36
5.0 to 9.9 percent	2	100	312	100	15	77	1,569	75
10.0 to 14.9 percent	-	-	-	-	7	93	702	92
15.0 to 19.9 percent	-	-	-	-	2	98	169	96
20.0 to 24.9 percent	-	-	-	-	1	100	172	100

Appendix table 3. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees engaged primarily in the canning of tomatoes according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states (continued)

State and percentage increase in wage bill of establishment	Minimum Hourly Wage Rates							
	35 cents				40 cents			
	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage
New Jersey and Delaware, total	12		2,169		12		2,169	
No increase	5	42	972	45	1	8	86	4
0.1 to 0.9 percent	2	58	819	83	1	17	725	37
1.0 to 4.9 percent	4	92	366	99	5	58	980	83
5.0 to 9.9 percent	1	100	12	100	4	92	366	99
10.0 to 14.9 percent	-	-	-	-	0	92	0	99
15.0 to 19.9 percent	-	-	-	-	1	100	12	100
Virginia, total	47		2,716		47		2,716	
No increase	-	0	-	0	-	0	-	0
0.1 to 0.9 percent	2	4	189	7	-	0	-	0
1.0 to 4.9 percent	9	23	658	31	-	0	-	0
5.0 to 9.9 percent	8	40	630	54	7	15	602	22
10.0 to 14.9 percent	7	55	322	66	3	21	214	30
15.0 to 19.9 percent	21	100	917	100	7	36	534	50
20.0 to 24.9 percent	-	-	-	-	2	40	127	54
25.0 to 29.9 percent	-	-	-	-	5	51	234	65
30.0 to 33.3 percent	-	-	-	-	23	100	955	100
All other states, total b/	46		7,192		46		7,192	
No increase	10	22	2,150	30	6	13	1,028	14
0.1 to 0.9 percent	10	43	2,261	61	4	22	2,371	47
1.0 to 4.9 percent	6	57	492	68	9	41	985	61
5.0 to 9.9 percent	3	63	256	72	5	52	388	66
10.0 to 14.9 percent	9	83	1,060	86	2	57	131	68
15.0 to 19.9 percent	8	100	973	100	0	57	0	68
20.0 to 24.9 percent	-	-	-	-	3	63	256	72
25.0 to 29.9 percent	-	-	-	-	7	78	626	80
30.0 to 33.3 percent	-	-	-	-	10	100	1,407	100

Source: Wage and Hour Division Questionnaire Survey, 1942.

a/ Including quick-frozen fruits and vegetables and canned soups.

b/ Connecticut, 1 establishment; New York, 2; Pennsylvania, 5; Illinois, 4; Michigan, 3; Wisconsin, 1; Iowa, 5; Utah, 2; Colorado, 1; Oklahoma, 1; California, 4; Florida, 1; Texas, 1; Louisiana, 1; Tennessee, 4; Kentucky, 7; West Virginia, 2; South Carolina, 1.

Appendix table 4. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees engaged primarily in the canning of peas according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states

State and percentage increase in wage bill of establishment	Minimum hourly wage rates							
	35 cents				40 cents			
	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage
United States, total	34		8,769		34		8,769	
No increase	10	29	1,733	20	6	18	865	10
0.1 to 0.9 percent	20	88	6,656	96	6	35	3,374	48
1.0 to 4.9 percent	4	100	380	100	17	85	3,845	92
5.0 to 9.9 percent	-	-	-	-	5	100	685	100
Wisconsin, total	21		3,742		21		3,742	
No increase	6	29	926	25	3	14	384	10
0.1 to 0.9 percent	11	81	2,436	90	-	14	-	10
1.0 to 4.9 percent	4	100	380	100	13	76	2,673	82
5.0 to 9.9 percent	-	-	-	-	5	100	685	100
All other states, total b/	13		5,027		13		5,027	
No increase	4	31	807	16	3	23	481	10
0.1 to 0.9 percent	9	100	4,220	100	6	69	3,374	77
1.0 to 4.9 percent	-	-	-	-	4	100	1,172	100

Source: Wage and Hour Division Questionnaire Survey, 1942.

a/ Including quick-frozen fruits and vegetables and canned soups.

b/ Maine, 1 establishment; New York, 1; Delaware, 1; Montana, 1; Utah, 1; Colorado, 1; Washington, 5; Oregon, 2.

Appendix table 5. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees engaged primarily in the canning of corn and peas according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima, by states

State and percentage increase in wage bill of establishment	Minimum hourly wage rates: 35 cents: Number of establishments in survey	35 cents: Cumulative percentage	35 cents: Number of employees in survey	35 cents: Cumulative percentage	40 cents: Number of establishments in survey	40 cents: Cumulative percentage	40 cents: Number of employees in survey	40 cents: Cumulative percentage
United States, total	51		11,289		51		11,289	
No increase	19	37	3,675	33	4	8	629	6
0.1 to 0.9 percent	21	78	6,171	87	8	24	3,821	39
1.0 to 4.9 percent	8	94	1,258	98	26	75	4,999	84
5.0 to 9.9 percent	3	100	185	100	6	86	1,101	93
10.0 to 14.9 percent	-	-	-	-	6	98	601	99
15.0 to 19.9 percent	-	-	-	-	-	98	-	99
20.0 to 24.9 percent	-	-	-	-	1	100	138	100
Wisconsin, total	27		4,538		27		4,538	
No increase	12	44	2,291	50	1	4	161	4
0.1 to 0.9 percent	10	81	1,669	87	2	11	292	10
1.0 to 4.9 percent	5	100	588	100	19	81	3,492	87
5.0 to 9.9 percent	-	-	-	-	2	89	221	92
10.0 to 14.9 percent	-	-	-	-	3	100	372	100
All other states, total b/	24		6,751		24		6,751	
No increase	7	29	1,394	21	3	12	468	7
0.1 to 0.9 percent	11	75	4,502	87	6	37	3,529	59
1.0 to 4.9 percent	3	87	670	97	7	67	1,507	82
5.0 to 9.9 percent	3	100	185	100	4	83	880	95
10.0 to 14.9 percent	-	-	-	-	3	96	229	98
15.0 to 19.9 percent	-	-	-	-	-	96	-	98
20.0 to 24.9 percent	-	-	-	-	1	100	138	100

Source: Wage and Hour Division Questionnaire Survey, 1942.

a/ Including quick-frozen fruits and vegetables and canned soups.

b/ New York, 6 establishments; Indiana, 1; Illinois, 3; Iowa, 1; Minnesota, 6; Maryland, 7.

(12,317)

Appendix Table 6. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees engaged primarily in the production of frozen and cold-packed foods according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima

Percentage increase in wage bill of establishment	Minimum hourly wage rates: 35 cents: Number of establishments in survey	35 cents: Cumulative per centage	35 cents: Number of employees in survey	35 cents: Cumulative percentage	40 cents: Number of establishments in survey	40 cents: Cumulative per centage	40 cents: Number of employees in survey	40 cents: Cumulative percentage
United States total	35		7,023		35		7,023	
No increase	21	60	2,977	42	15	43	2,204	31
0.1 to 0.9 percent	7	80	2,563	79	5	57	2,014	60
1.0 to 4.9 percent	1	83	234	82	4	69	314	73
5.0 to 9.9 percent	1	86	580	90	2	74	208	76
10.0 to 14.9 percent	4	97	459	97	3	83	434	82
15.0 to 19.9 percent	1	100	210	100	-	83	-	82
20.0 to 24.9 percent	-	-	-	-	2	89	678	92
25.0 to 29.9 percent	-	-	-	-	2	94	315	96
30.0 to 33.3 percent	-	-	-	-	2	100	256	100

Source: Wage and Hour Division Questionnaire Survey, 1942

a/ Including quick-frozen fruits and vegetables and canned soups.

(12,317)

Appendix Table 7. Canned and dried fruits and vegetables branch a/: Distribution of establishments and employees engaged primarily in the production of dried and dehydrated foods according to percent increase in wage bill for each establishment resulting directly from the adoption of 35-cent and 40-cent minima

Percentage increase in wage bill of establishment	Minimum hourly wage rates							
	35 cents				40 cents			
	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage	Number of establishments in survey	Cumulative percentage	Number of employees in survey	Cumulative percentage
United States, Total	36		4,237		36		4,237	
No increase	31	86	3,940	93	27	75	3,482	82
0.1 to 0.9 percent	3	94	254	99	5	89	645	97
1.0 to 4.9 percent	2	100	43	100	2	94	67	99
5.0 to 9.9 percent	-	-	-	-	1	97	21	99
10.0 to 14.9 percent	-	-	-	-	-	97	-	99
15.0 to 19.9 percent	-	-	-	-	1	100	22	100

Source: Wage and Hour Division Questionnaire Survey, 1942

a/ Including quick-frozen fruits and vegetables and canned soups.

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